

THE MILLING WORLD

AND

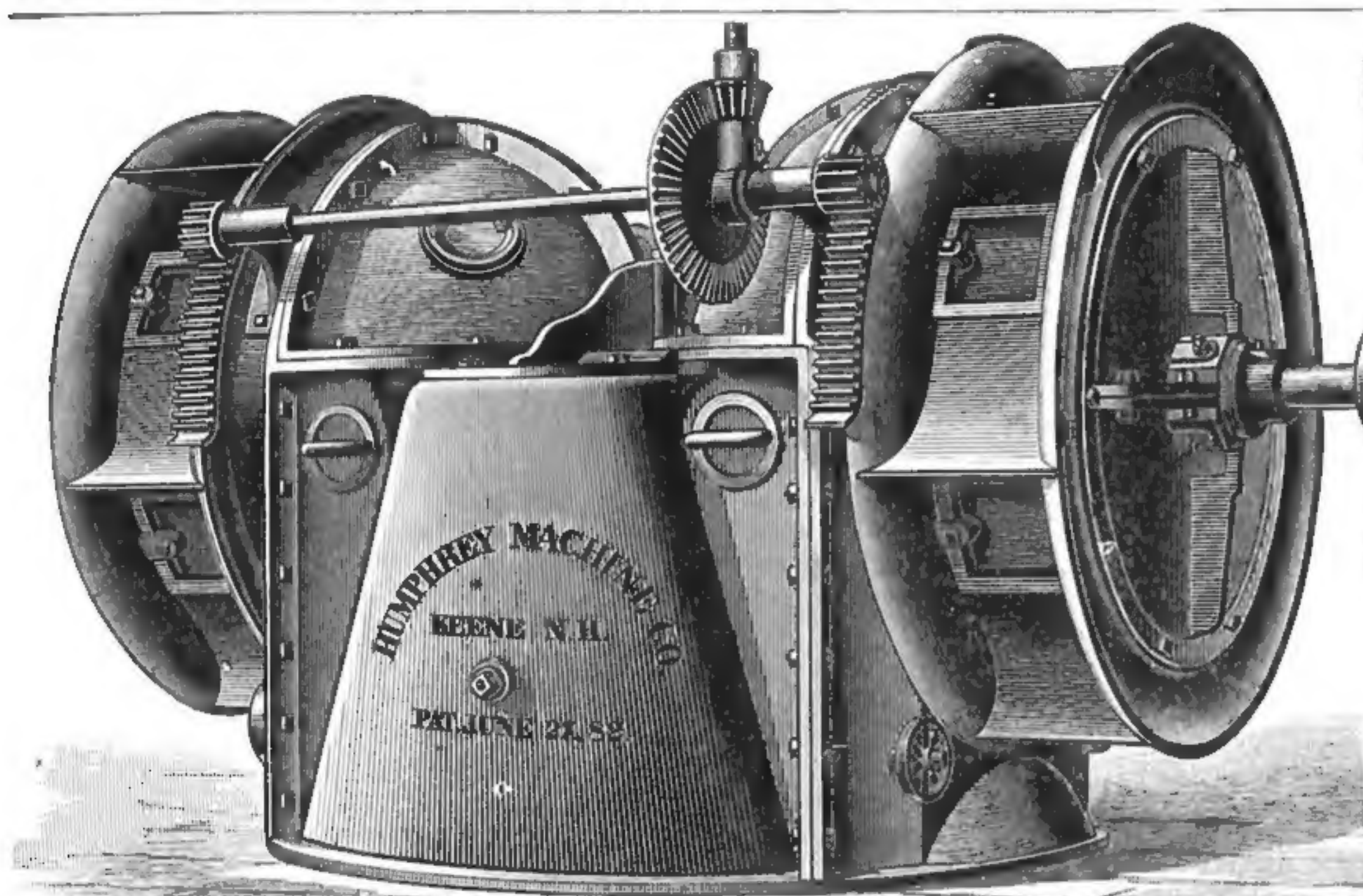
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XXIII. No. 5.

BUFFALO, N. Y., SEPTEMBER 29, 1890

\$1.50 PER YEAR.



THE X-L-G-R OR
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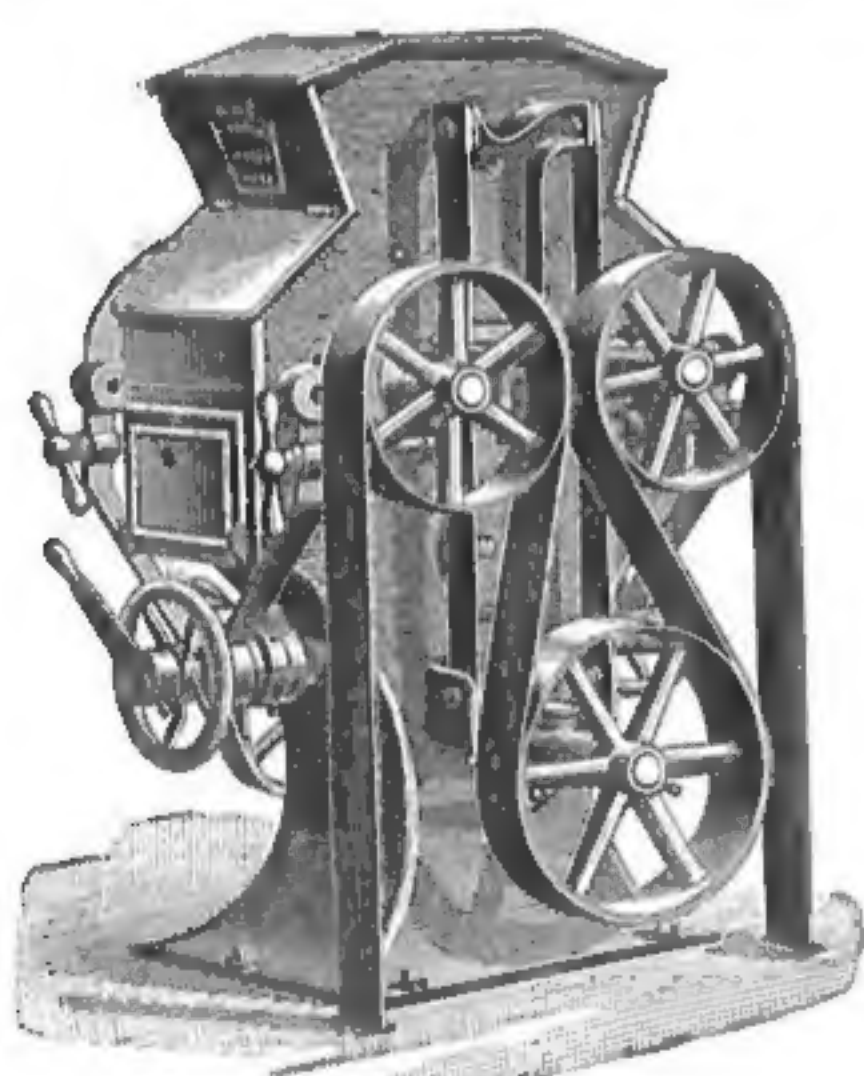
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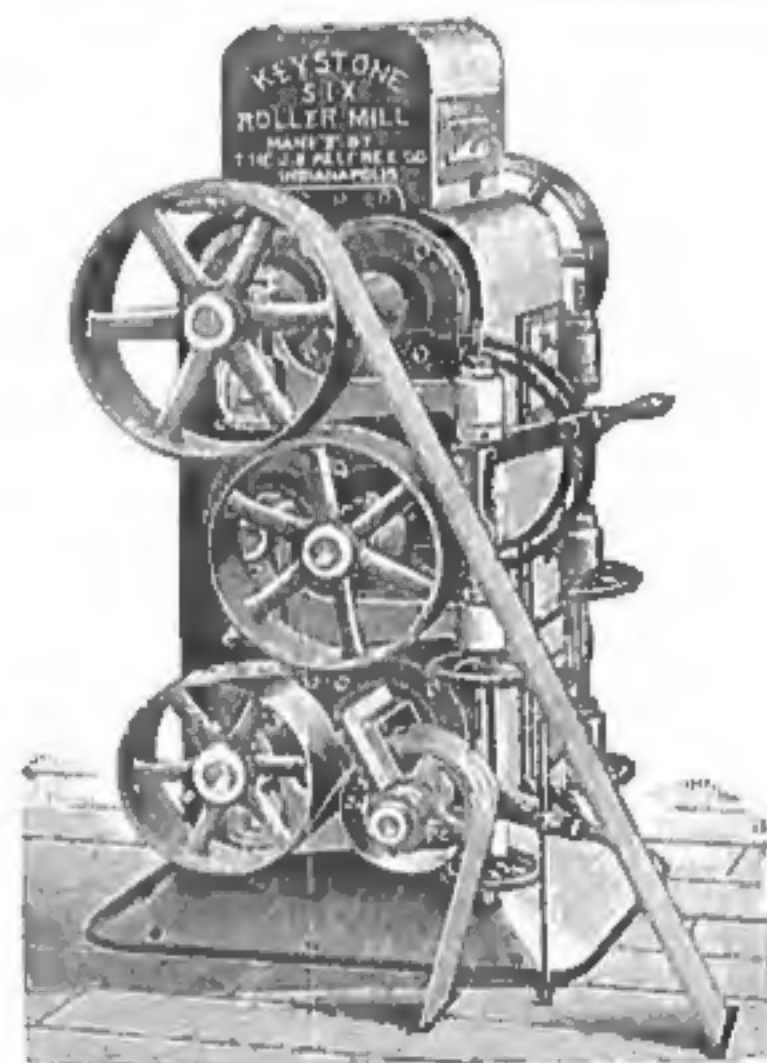
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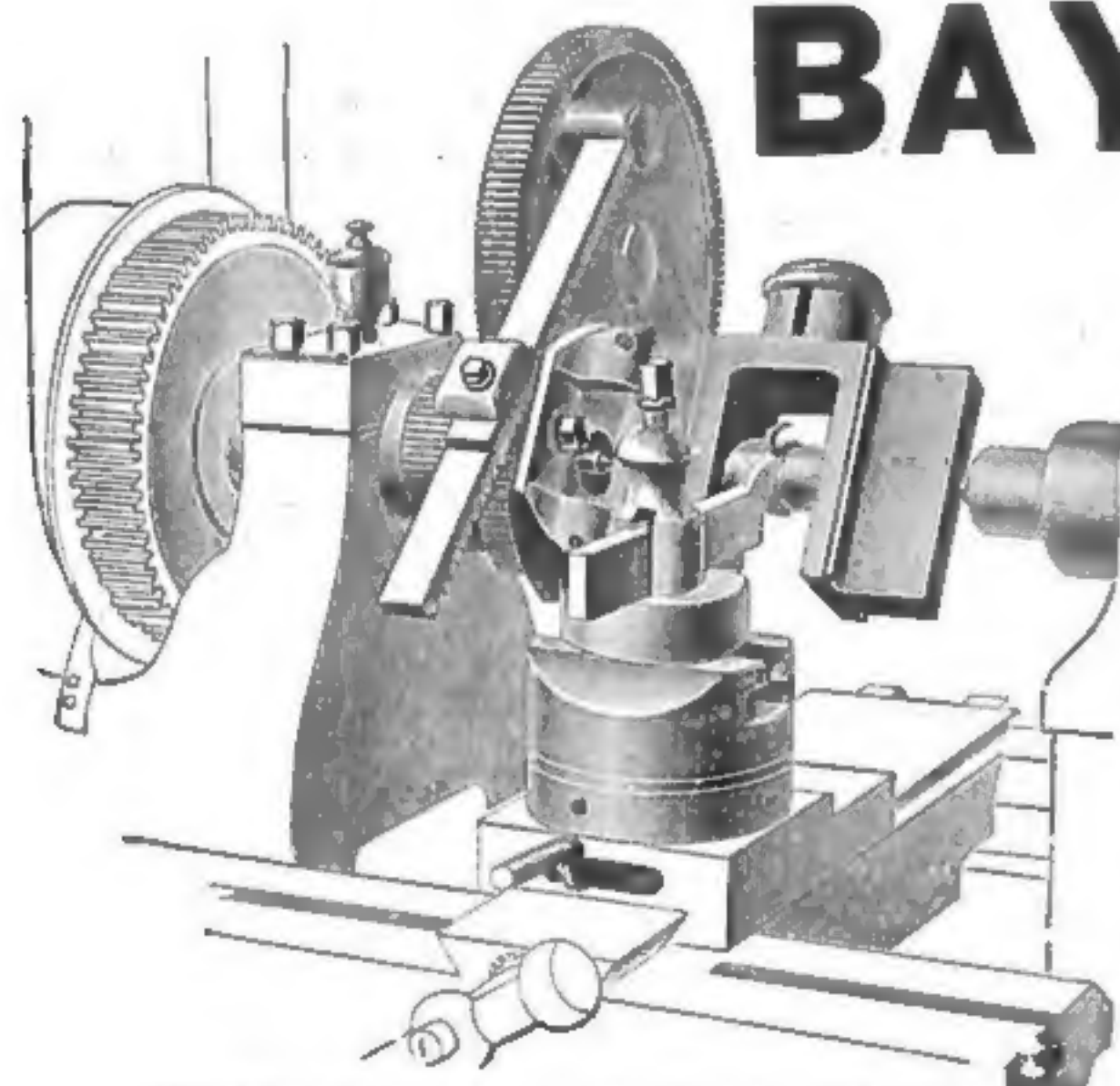
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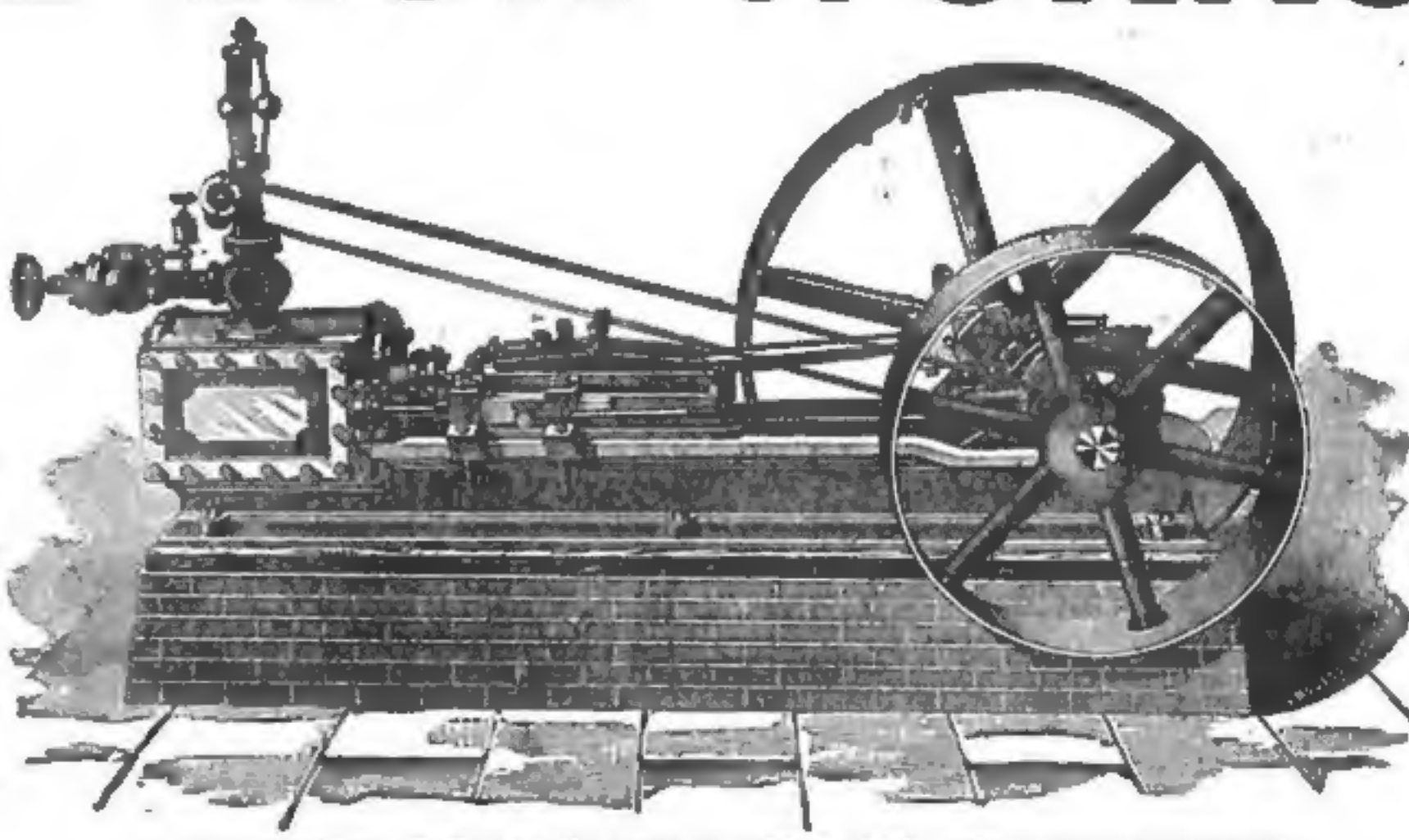
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The Case Roller Mills. Over 14,000 Pairs in Use.

PLEASE READ OUR DESCRIPTION OF THEM, EVERY STATEMENT OF WHICH IS ABSOLUTELY TRUE.

PLEASE READ WHAT MILL OWNERS SAY ABOUT THEM.



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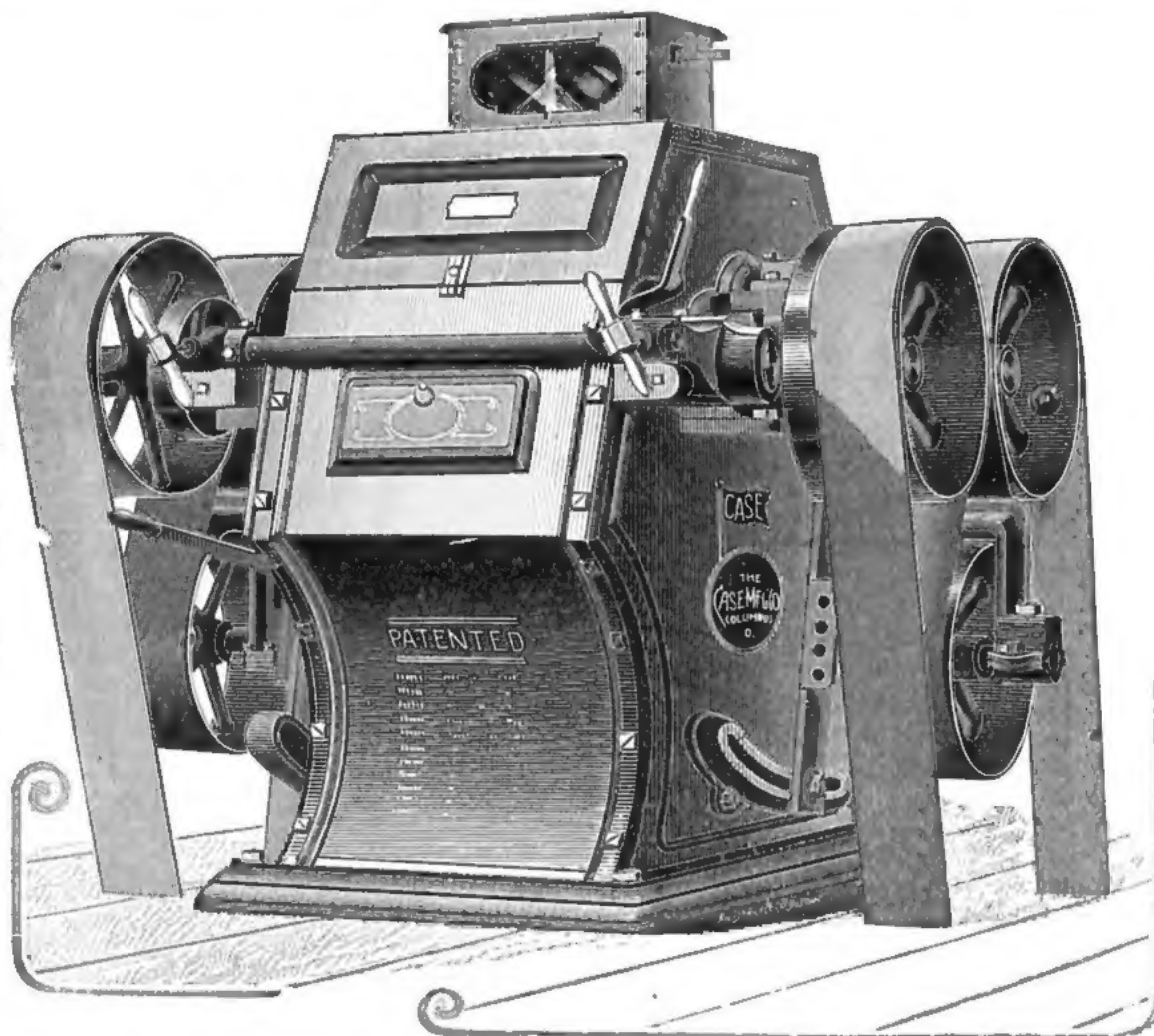
The frame is of iron with a heavy iron base.

The wood-work in top is of select cherry and black walnut, carefully shellacked and varnished.

The handles of adjusting screws and levers are finely nickel plated.

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The adjustments easy, simple and perfect.



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The belt drive is positive—no little short belts to slip.

The door for examining stock is a great convenience.

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The rolls can be thrown apart their entire length by one movement of the lever, and brought back again to original position, requiring no re-setting or experimenting.

Each machine is provided with our AUTOMATIC VIBRATING FEED, which requires no attention, and never fails to spread the feed the entire length of the rolls.



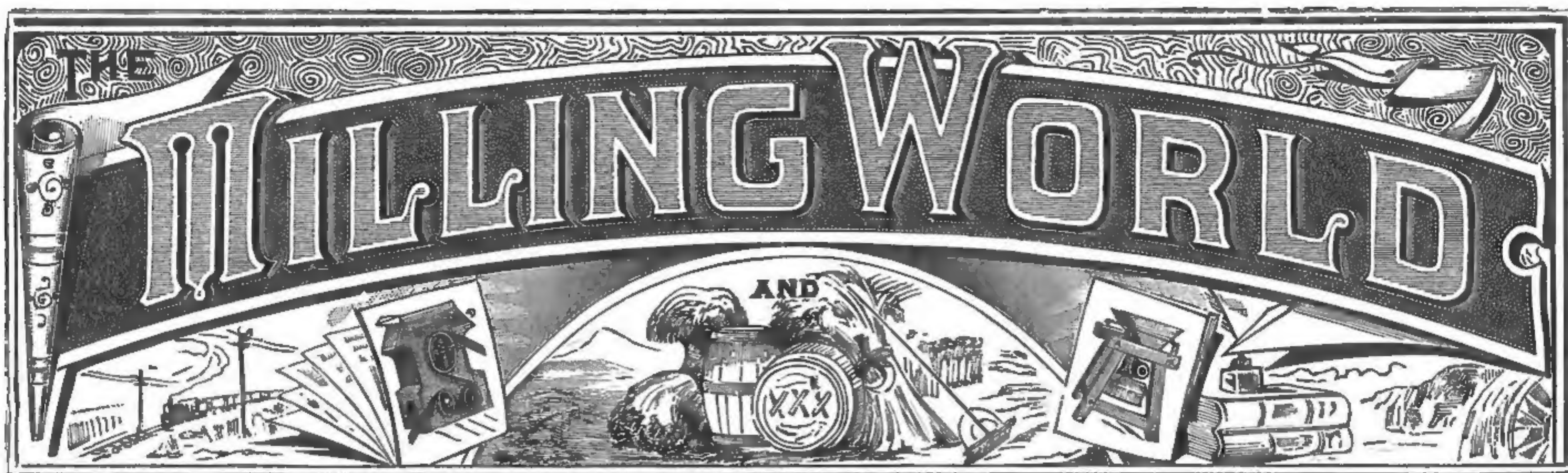
LISTEN! MICHIGAN MILLERS TALKING NOW.

CHARLOTTE, MICH., AUG. 5, 1890.

MESSRS. CASE MFG. CO., COLUMBUS, O.

Gentlemen: The mill is running fine. We are enjoying quite a fine litt'e trade. Already have put over twenty tons of flour on the market here since we started the 7th of July, and it is giving elegant satisfaction. Every one who has seen our outfit pronounces it A 1, and the Case Automatic Feed can't be beat. In fact the Rolls are models of perfection. We are making a close finish and placing our goods alongside of the long system mills, carrying off the cake. We are highly pleased with the millwright work, and find your Messrs. McKenie and Shough congenial gentlemen to do business with.

Very truly yours, PERKINS & MOON.



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PUBLISHED EVERY MONDAY MORNING

VOL. XXIII. No. 5.

BUFFALO, N. Y., SEPTEMBER 29, 1890.

\$1.50 PER YEAR.

OUR esteemed Chicago cotemporary, "The American Miller," calls the Minneapolis "Yahoo" the "Pollino del Nordovest." We protest. It is an insult to the "Pollino" family to force the "Yahoo" into membership in it. Even "Pollino Piojoso" would not answer demand. The Willie Edgar periodical is a "Yahoo," plain and simple "Yahoo," engaged incessantly in true "Yahoo" practices. The "Pollino" is a respectable creature, far above the "Yahoo" in the animal scale, and our esteemed cotemporary should not try to reverse the processes of transmigration. The "Yahoo" has lots of "evoluting" to do in order to reach the eminently respectable "Pollino" stage.

SPRING wheat is a very valuable and desirable grain, but it can not be safely denied that the culture of wheat in countries situated too far north to allow winter-sowing of wheat is at best an occupation full of difficulties. The present season proves this. In Montana, North Dakota, South Dakota and Minnesota there has been a succession of drawbacks, storms, drouths, floods, frosts and insect pests that have combined to reduce the output of wheat in those States very largely. Where favorable conditions would have given a crop of 140,000,000 bushels or more, the actual crop is not much over 100,000,000 bushels, and the quality is reduced in proportion to the reduction in quantity, although that does not always follow. Northward from the frontier of Minnesota and North Dakota the conditions have been declared far more favorable, but, according to recent information, Manitoba and Assiniboia, in the Dominion of Canada, have fared quite as badly as the four States mentioned. A dispatch from Ottawa, Ontario, Canada, dated September 17th, throws a curious light on the great claims made for the Canadian Northwest by the boomers. That dispatch reads as follows: "Advices received here by the Government today state that, notwithstanding contradictory reports, the damage to the wheat of the Northwest is much more serious than is generally known. The crop has not only been injured by frost, but rain and snow have damaged it to a very considerable extent. Where it was believed a short time ago that 10,000,000 bushels would rank No. 1 hard wheat, it is now calculated that only 1,000,000 bushels will reach that grade. The yield will be large, but the bulk of it will only grade Nos. 3 and 4." As the grade settles the actual money value of the crop, it follows that the losses to the spring-wheat growers of northwestern Canada amount to a disaster. It is known that the frosts in mid-August were general over Manitoba, but the boomers insisted that they were very light and that no damage was done. The concealment of the damage will simply postpone the exposure, and the actual crop of fine wheat will be so small that growers may well begin to wonder whether it is wise or profitable to wrestle longer with the elements in the Northwest in the attempt to snatch a wheat crop between the frosts that seem to be regular and inevitable occurrences in August in that section.

Now what is the matter with Canada? According to the boomers, the Dominion is the most glorious country on earth, and the percentage racket is made to show that Canada has

advanced more rapidly than the United States in population, in railroading, in agriculture, in manufacturing and in all other material ways, while in all moral, social and civil ways Canada is so far ahead of the United States that comparison is impossible. Yet, on top of all this, here is the "Free Press," published at Ottawa, Ontario, right in the cardiac region, so to speak, of Canada, talking in the following incomprehensibly lugubrious strain about Canada: "Our cotton mills are earning no dividends. Our farmers, lumbermen and fishermen are threatened with the exclusion of their products from the United States market. The policy of trade restriction has turned out a most deplorable fiasco. But then it is most unpatriotic to speak of these things or to refer to the fable of the ant and the grasshopper. That was only a fable, after all. Let us eat, drink and be merry. What if there are twelve or fifteen hundred men out of employment around Ottawa. They can go to the Northwest and get a few weeks' work at harvesting. They can earn enough money in that way to pay their passages out, and perhaps they can beat their way back on freight trains after the harvest is over. The wives and families of these men need not eat anything while the husbands and fathers are away. It is a good thing to fast sometimes. The statement that shanty-men and mill-hands do not make good harvest hands is all nonsense. Mr. Haggart knows better than that. He has been in the lumbering business himself. Did he not get a timber limit for a song and sell it for a large sum of money? Then if lumbering operations are restricted, the number of hands employed in the woods and mills reduced 50 or 60 per cent. and the weekly circulation of money in the city reduced to that extent, what of it? There has been too much money circulating in Ottawa. What need we care about the condition of farmers, lumbermen, fishermen, miners and other workingmen so long as the monopolists and boodlers are happy and prosperous? It is true that our iron mines are idle. But would it not be a great mistake to develop them? We must leave some iron ore in the hills for future generations to dig out and smelt. It would be most unjust to posterity to disturb the great iron deposits of the Ottawa district just now. If our lumbermen and square-timber makers can not sell their products, let them keep them. If any man ventures to suggest that reciprocity with the United States would be a good thing for Canada, don't stop to reason with him. He will beat you in argument. Tell him simply that he is an enemy to his country, even if he is the wealthiest or the best informed man in it. If somebody refers to our Tory leaders having invested their wealth in American railways and lands, say it is evidence of their business prudence. Keep up the loyalty racket for all that it is worth, and if the people find out that they are being defrauded, or if the boodle gives out from any other cause, we can retire to some Texas ranche and sing 'God Save the Queen.'" Now, what in the name of cerulean chaos is the matter with Canada? The Ottawa paper ought to wait till the clouds roll by and then move over to the United States and grow up with the country. Such talk is enough to drive Aunt Vic wild over the conduct of her naughty pet child Canuck.

The DAWSON ROLL WORKS CO.

FOUNDERS & MACHINISTS,

—MANUFACTURERS OF THE—

Dawson Roller Mills

—AND FURNISHERS OF—

CHILLED IRON ROLLS

WITH DAWSON PATENT CORRUGATION.

ALL STYLES OF FLOUR MILL ROLLS RE-GROUND AND
RE-CORRUGATED WITH ANY FORM OF CORRUGATION.

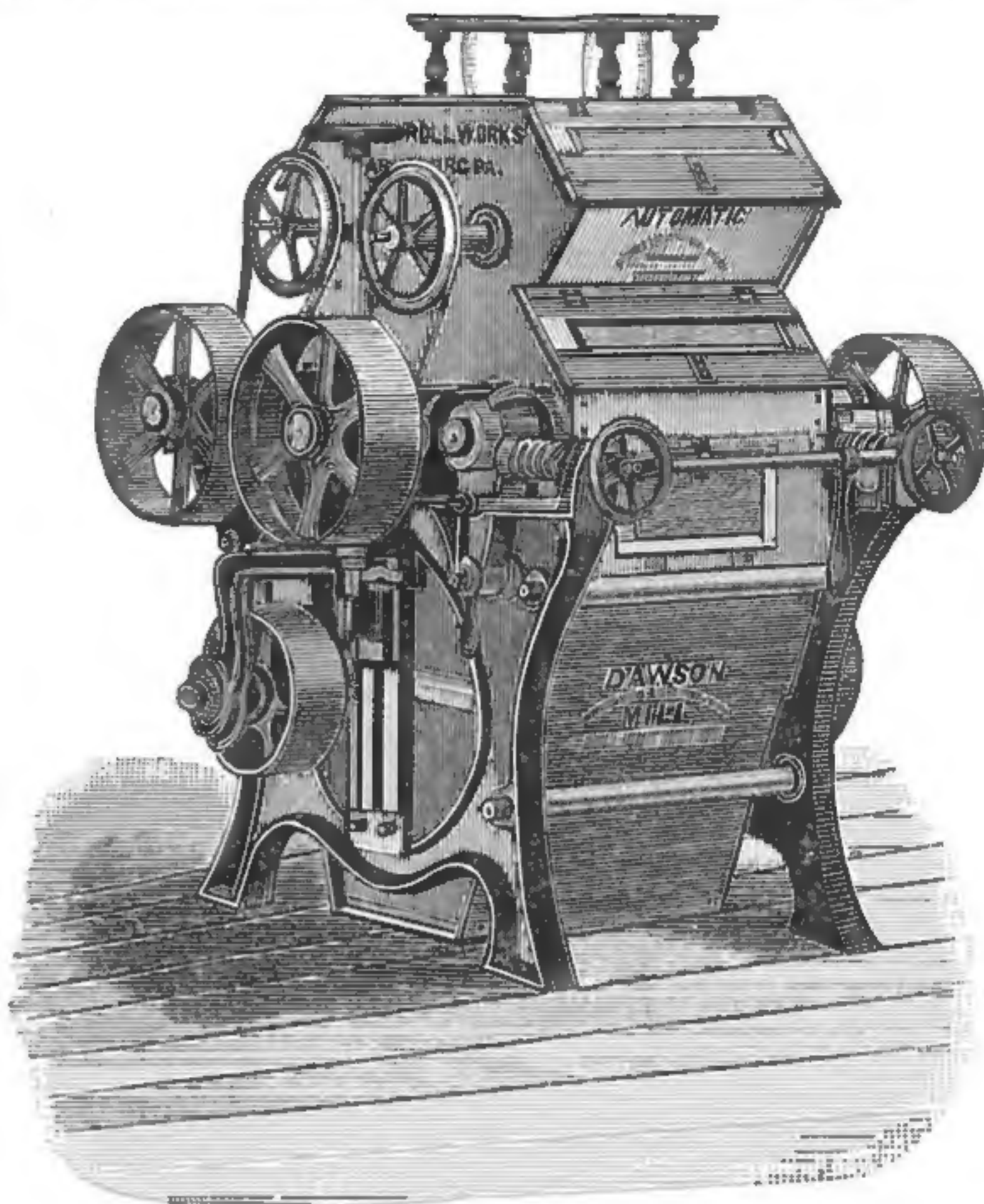
We have had large and extended experience in grinding and corrugating chilled rolls for milling, and have one of the largest and most improved plants in the country for this work, which enables us to meet the most exacting requirements of the trade promptly.

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BEST STEEL SAFETY MADE FOR
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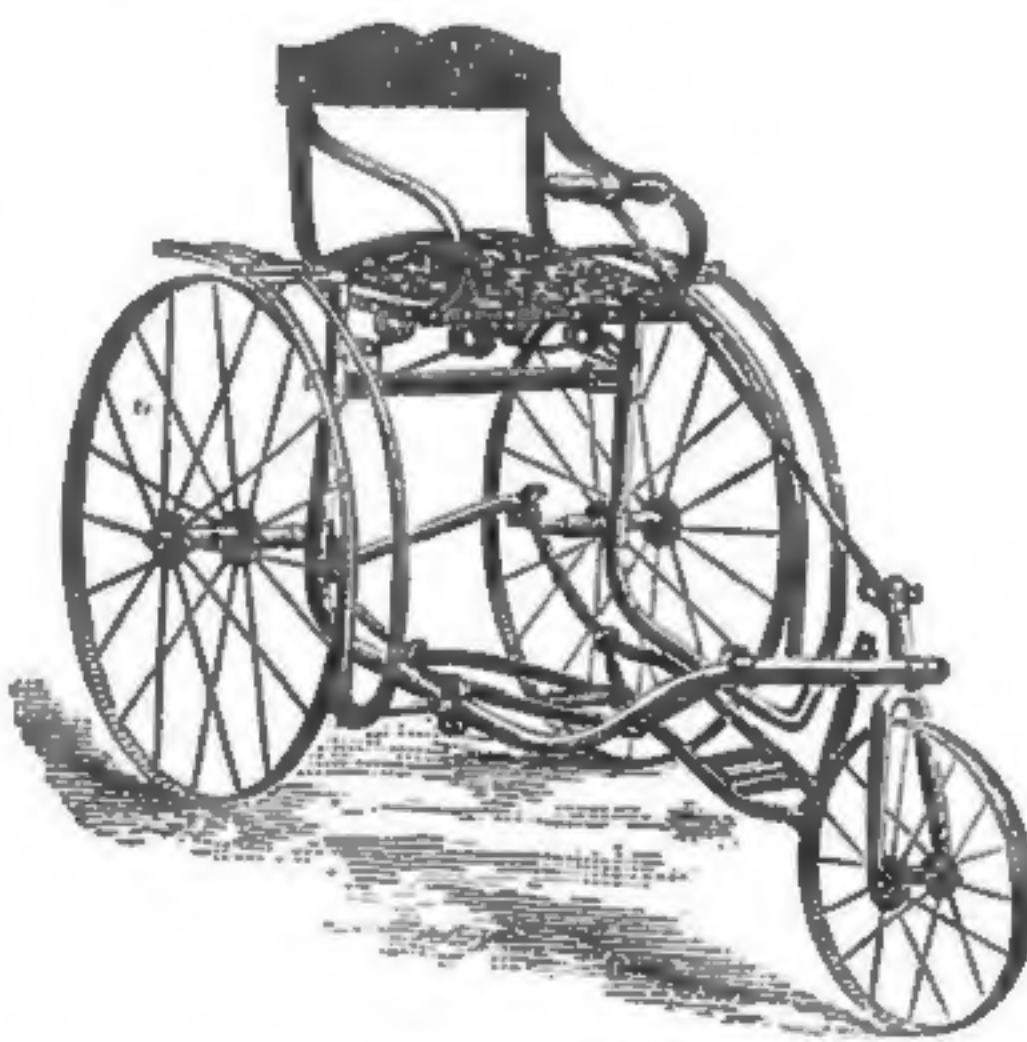
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Our Tricycles the Only Machine ever Recommended by Physicians for Ladies and Girls of a Delicate Constitution.

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Satisfaction ➤

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AMERICAN INJECTOR CO., NO. 175 Larned St., West, **DETROIT, MICH.**



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McFAUL & NOLAN, - - - PROPRIETORS
THOMAS MC FAUL, JAMES NOLAN.

SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in un-registered letter at sender's risk.
To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.
Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

ADVERTISING.

Rates for ordinary advertising made known on application.
Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisement taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.
Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.
Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.
This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.
Address all communications

THE MILLING WORLD, BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order.
Four consecutive insertions will be given for the price of three.

SITUATION WANTED.

Head miller with over 20 years experience want to make a change this spring. Address, A. MILLER, 67 Weaver Alley Buffalo, N. Y. 4t

SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office 10 cents must be added to pay postage.

WANTED, TO RENT.

A good Custom Mill, in a good grain section. Steam or water power. Address, MILLER, P. O. Box 170, Pocomoke City, Worcester County, Md. 252

FOR RENT.

Clinton Mills, at Back Rock, Buffa'o, for rent on reasonable terms, recently repaired and put in good order. App'y to CHAS. DANIELS, over 811 Main Street, Buffalo, N. Y. 6tf

FOR SALE.

Rare chance, Grist, Saw, Planing Mill, Lumber and Coal Yard, doing good business. Growing village; 15 miles from Washington. Owner wishes to retire. Small capital needed. Terms easy. A. FREEMAN, Vienna, Va. 37

WANTED.

A company being formed with large capital to operate flouring mill in vicinity of Washington and Baltimore, require a practical miller and first-class manager, who can command ten to twenty-five thousand dollars. For particulars address, HON. CHAS. S. BAKER, House of Representatives, Washington, D. C. 2326

FOR SALE.

A cheap and desirable mill property, consisting of a Grist Mill, Saw Mill, two dwelling houses and all other necessary buildings. The mill has a good custom trade, nicely situated in the borough of New Buffalo, Perry County, Pa. For full particulars call on or address JEFFERSON WADE, New Buffalo, Pa. 232

FOR SALE.

Flour and saw-mill with or without farm of 38 acres. Four buhr mill, with machinery and building in most excellent condition. Buildings on farm good. Good run of custom. Can run by water 9 months, also have steam power. Terms easy. On Big Indian Creek, 1/4-mile from Crandall, on Air Line. Mrs. C. KRACKMAN, Crandall, Ind. 36

MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.
One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.
One 14-Inch Vertical Feed Mill; best make, new, a bargain.
One No. 6 Dustless Separator; new, a bargain.
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.
Three No. 1 Corn Shellers, capacity 200 to 300 bushels per hour; new.
One No. 2 Purifier. New. Best make. A bargain.
One 20-Inch Portable Mill.
One 18-Inch Double Gear Portable Mill.
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

FOR SALE AT A BARGAIN.

I have a half interest in a Short System Roller Mill which I will sell at a bargain. Don't write unless you mean business. Address, GEO. FOSTER, Wakeman, O. 47

FOR SALE.

One No. 1 Howes, Babcock & Co., Silver Creek, N. Y., Lengthened Scourer and Smutter, nearly new. Address, CHAS. SCHOEPLIN & BRO., Gardenville, N. Y. 46

FOR SALE.

Whole or part of a 125-barrel Flouring Mill, built entirely new from ground up. Equipped with latest machinery. Side track at mill door. Located in South Michigan. Big local and exchange trade. For further particulars address B. B., care of THE MILLING WORLD. 87

MASTER Willie Edgar, of the "Yahoo," is getting a good deal of galling notice in these sweet autumnal days. He is getting his "just deserts."

DURING the past two weeks there has been a noticeable lull in the business of booming the Manitoba wheat crop. What's up? Did the rains of early September complete the ruin of the 40-bushel-to-the-acre wheat crop inaugurated by the mid-August frosts? Has the ruin been forced upon the attention of the boomers?

NOTWITHSTANDING Editor Cawker's disapproval of their contents, our esteemed British milling cotemporaries continue to be published regularly. Can not Editor Cawker get Assistant Editor Seamans to "do up" the British journals that have the temerity to go on living after they have been specifically condemned by the great and only milling-editorial humorist of Milwaukee?

CAPITALISTS, who are looking for places in which to establish some "supreme milling centers," should not fail to keep an optic or two out towards Niagara Falls, where the big tunnel project is taking form and feature at a rapid rate. When that bore is completed, the village of Niagara Falls will be ready for any amount of "supremacy as a milling center," and dusty Minneapolis will have to look to her laurels. Meanwhile, let inquirers remember that Niagara Falls is not Buffalo. It is twenty miles from the center of Buffalo to the Falls, a fact which seems to escape the knowledge of outsiders.

Now it is broadly intimated that ex-Secretary Seamans is guilty of writing the alleged editorials in the Milwaukee "Name." Is not the intimation a specimen of refined cruelty? Surely, no one ever accused Sam Seamans of imbecility. It is incredible that he is trying to imitate "Arizona Kicker, Jr.," who once illumined the columns of the "Name." If the virile Sam were to wield the editorial quill, it would be in order to look and listen for orotund thunders, vigorous vernacular, denunciation and rip-smashing cavorting all around, instead of the mild and kid-like bleatings that emanate from the "Name." No, no! It can't be Sam!!

RECENT discussion of the Millers' National Association and its aims, methods and achievements has been interesting in proving how very little influence that body has in the field it pretends to occupy. The one milling journal that stands up for it does so in spite of the express declaration, by one of the most prominent members of the association, that it is a body that aims to look after the "big miller's" interest, and that cares not a snap of the finger for the "little miller," or the miller who grinds less than 200 barrels of flour a day. The frantic efforts of the worthy secretary of the National to increase its membership have come to naught simply because there is nothing in the National to attract millers directly into membership, and nothing in it to keep those members who are brought in indirectly by voting local bodies into the National. It remains a close corporation of flour-exporters. It absolutely ignores the making of flour and the makers of flour. It has no more connection with the rank and file of practical millers in the United States than has a Wall Street or a Chicago Board of Trade Clique of brokers or speculators. The single milling journal, that pretends to see in the National just the right sort of association for all millers to join, evidently sees through the millstone about 100 per cent. farther than the hole goes.

BOILER-FRONTS.*"The Locomotive."*

Boiler-fronts are made in many different styles, almost every maker having some peculiar points in design that he uses on his own boilers, and which nobody else uses. However, if we leave out the water-fronts and the various patented fronts, we may classify all those that are used on horizontal tubular boilers under the four heads, (1) flush, (2) overhanging, (3) cut-away, and (4) fronts with breeching.

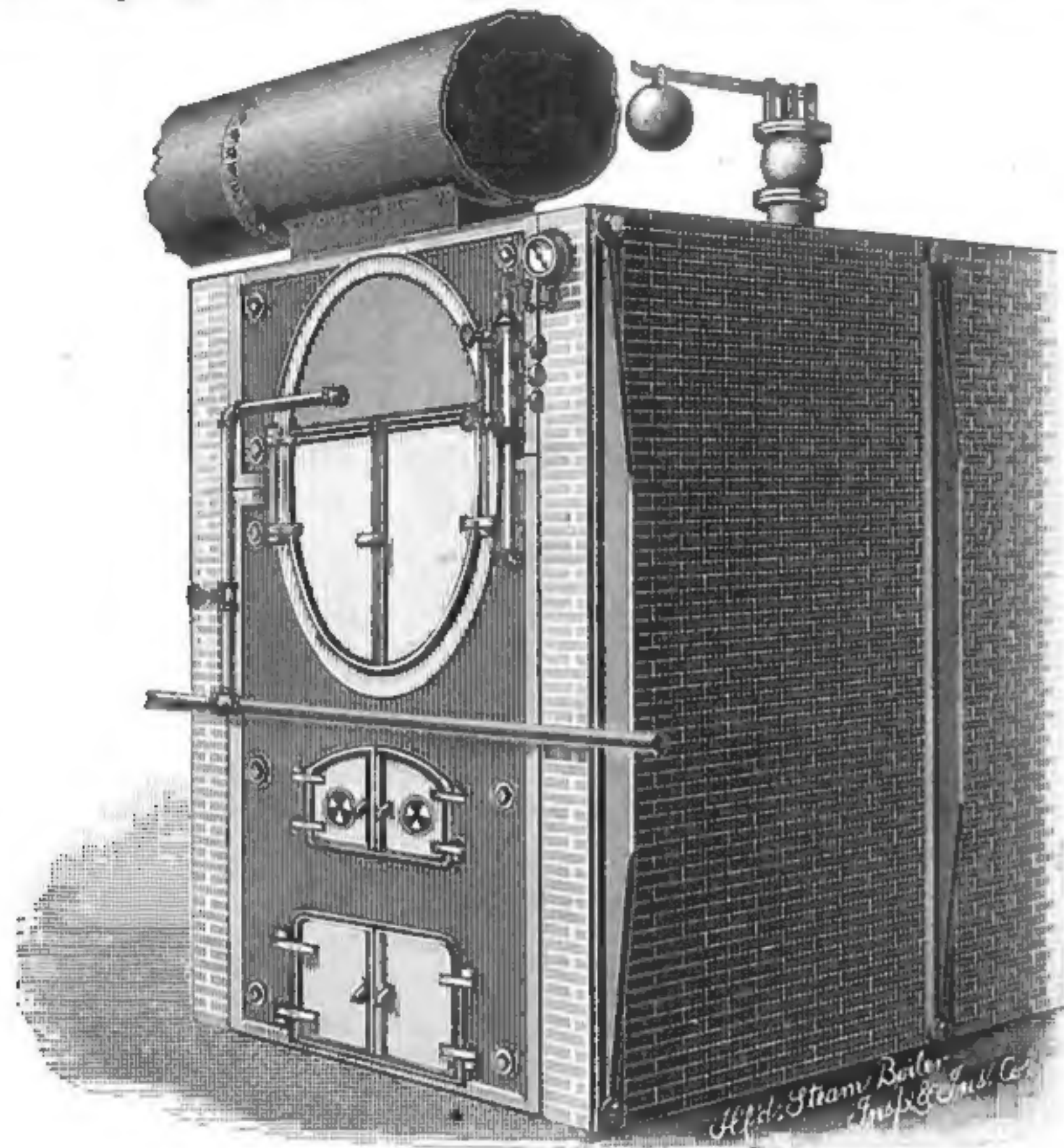


FIG. 1.—A FLUSH FRONT.

Fig. 1 is a perspective view of a flush front, and Fig. 2 is a sectional view of the setting. This was one of the earliest forms of fronts, and though it often gives good satisfaction, it is liable to certain accidents that will be presently explained, and we always recommend one or other of the three other styles. As will be seen from the cuts, the front of the smoke-arch, in this form of setting, is flush with the front of the brick-work, and the dry-sheet just outside of the front head is built into the brick-work. The heat from the fire, striking through the brick-work, impinges on this sheet, which is unprotected by water on the inside. So long as the furnace

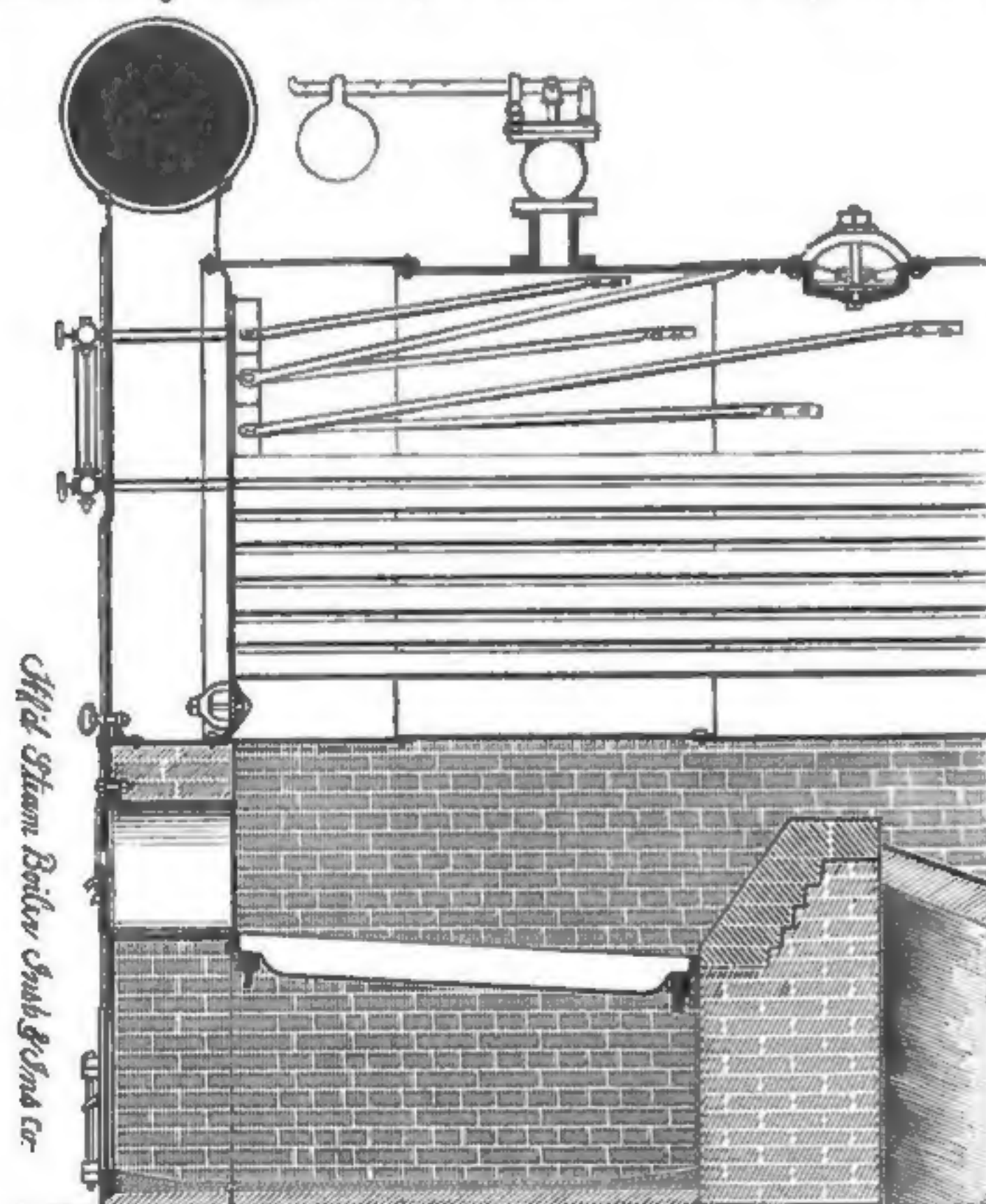


FIG. 2.—SECTIONAL VIEW OF FLUSH FRONT.

walls are in proper condition, the heat thus transmitted should not be sufficient to give trouble; but after running some time, bricks are very apt to fall away from over the fire-door and thus expose portions of the dry-sheet to the direct action of the fire, causing it to be burned or otherwise injured by the heat, and perhaps starting a leakage around the front row of rivets where the head is attached to the shell. In the overhanging front, shown in the perspective

in Fig. 3 and in section in Fig. 4, this tendency is entirely prevented by setting the boiler in such a manner that the

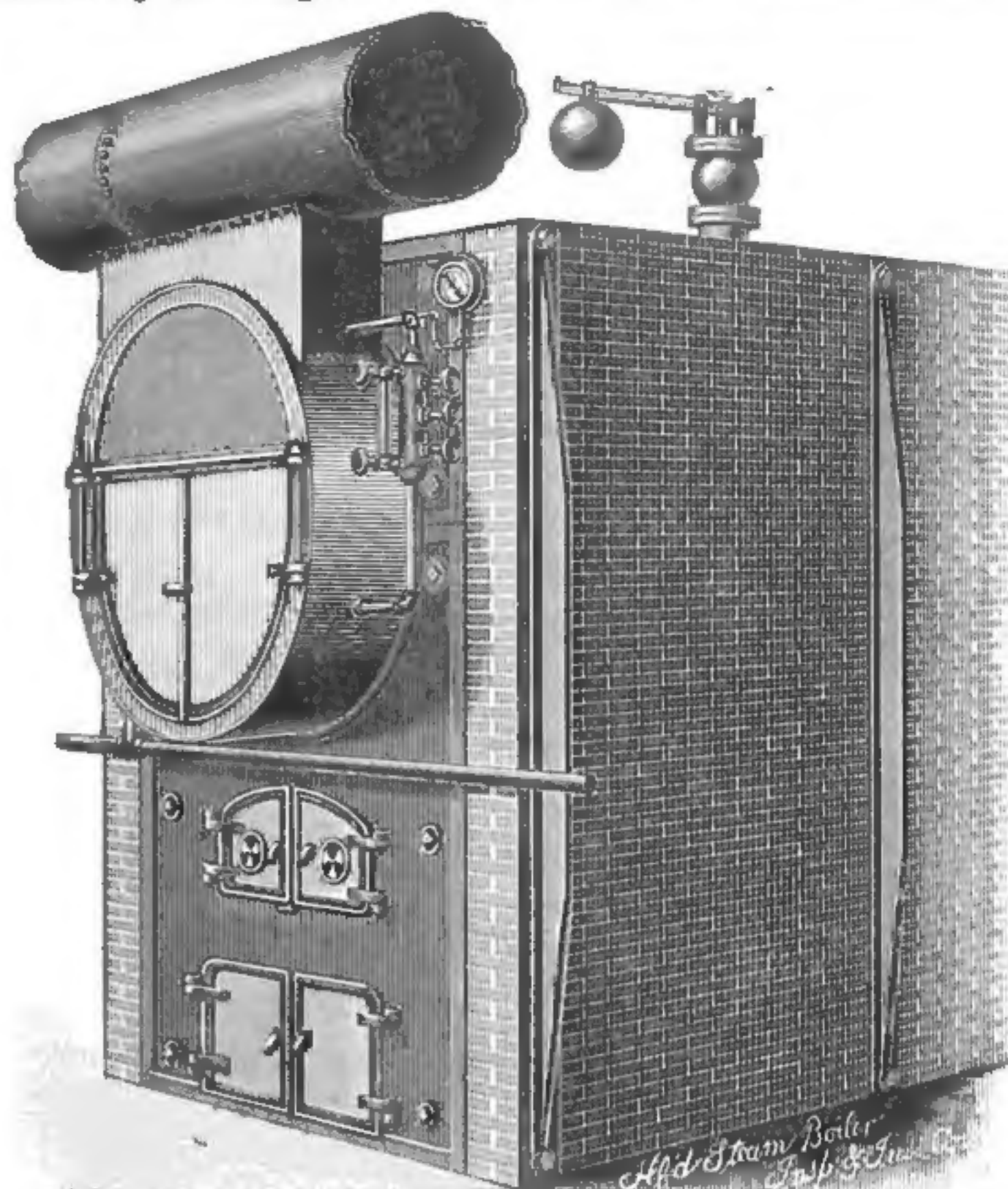


FIG. 3.—AN OVERHANGING FRONT.

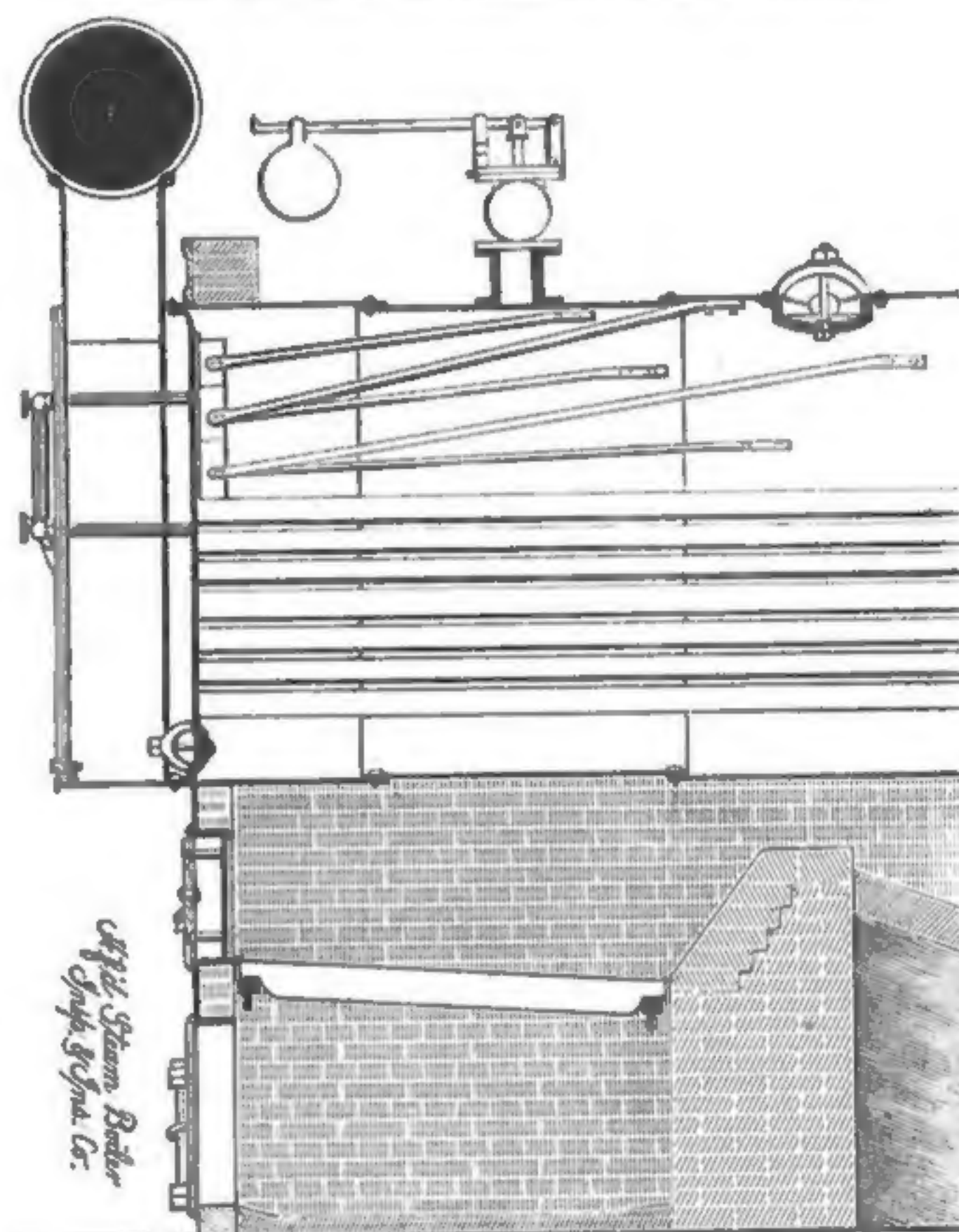


FIG. 4.—SECTIONAL VIEW OF OVERHANGING FRONT.

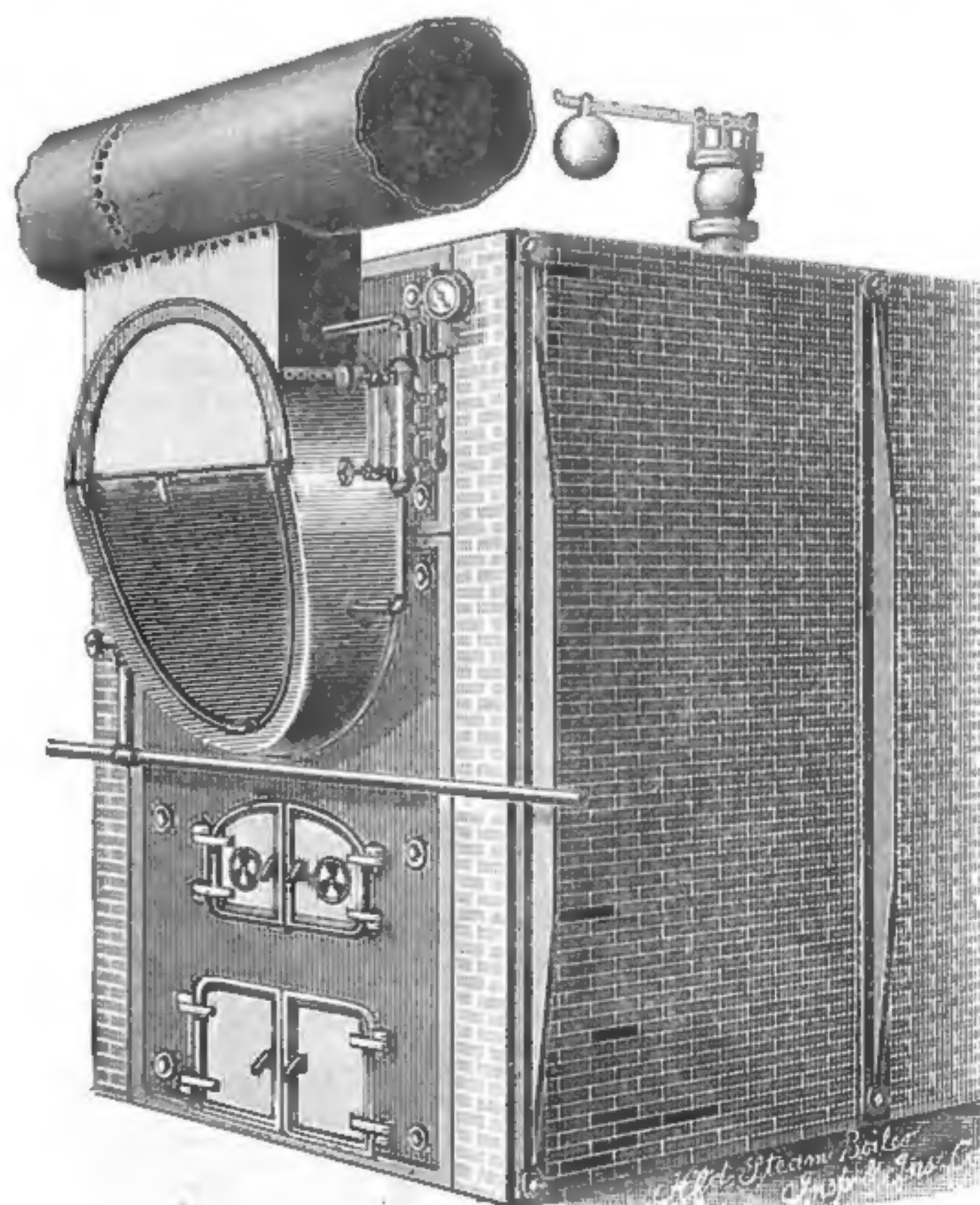


FIG. 5.—A CUT-AWAY FRONT.

dry-sheet projects out into the boiler-room. If the brick-work over the fire-door falls away when a boiler is set in this

manner, the only effect is to increase slightly the heating surface. No damage can be done, since the sheet against which the heat would strike is protected by water on the inside. The objection is sometimes raised against the projecting front, that it is in the way of the fireman. To meet this point and yet preserve all the advantages of this kind of front, the cut-away style has come into use. It is shown in perspective and in section in Figs. 5 and 6, respectively.

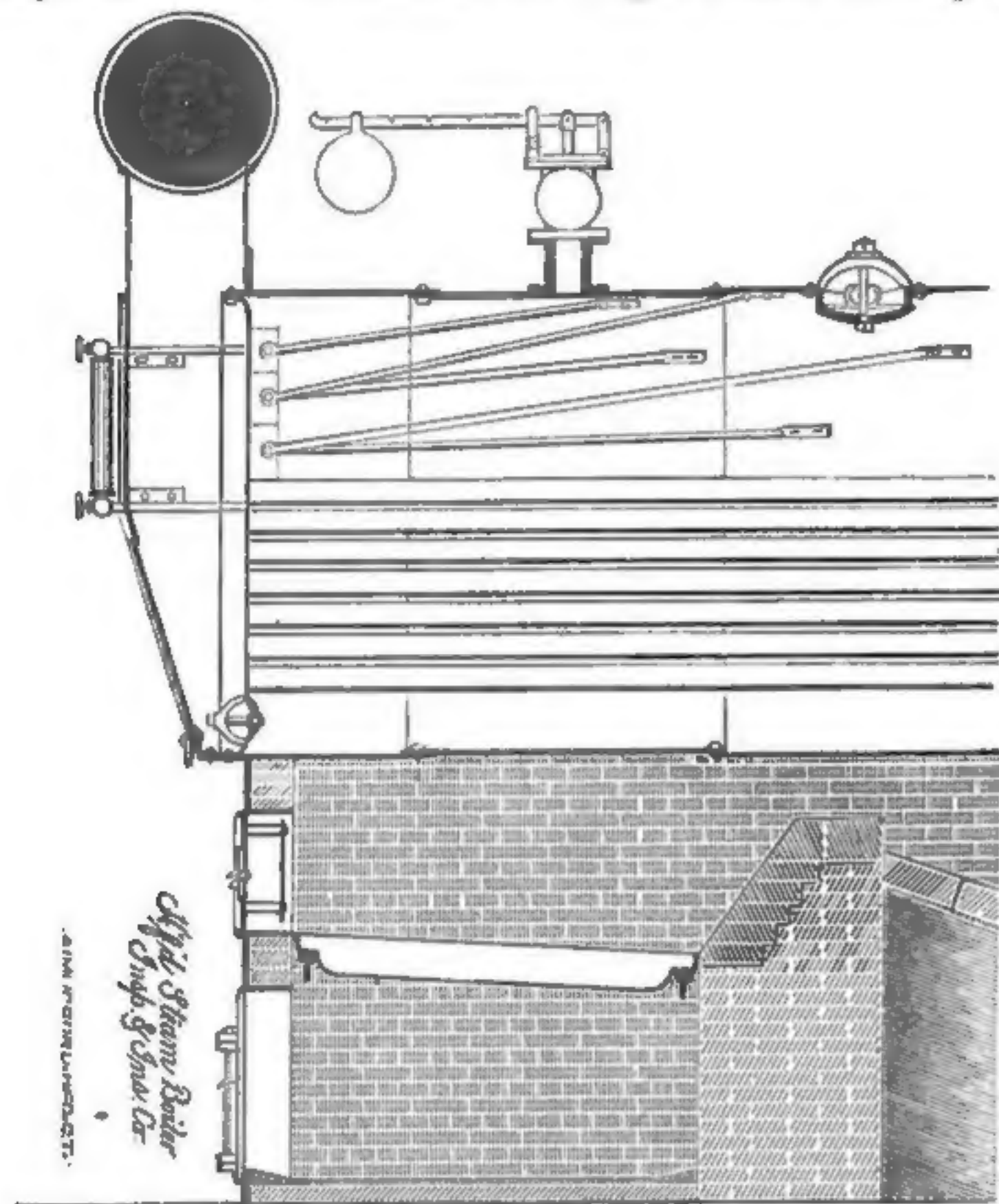


FIG. 6.—SECTIONAL VIEW OF A CUT-AWAY FRONT.

In this form the lower portion of the front sheet is cut obliquely away, so that at the lowest point the boiler projects but little beyond the brick-work. Although this style of front may have some advantages in the way of convenience, it has a serious disadvantage that should be well considered. It will be noticed that in the flush and overhanging fronts the doors open sidewise, swinging about vertical hinges. This is not always the case, as sometimes, and particularly in old boilers, the hinge is horizontal and the door swings

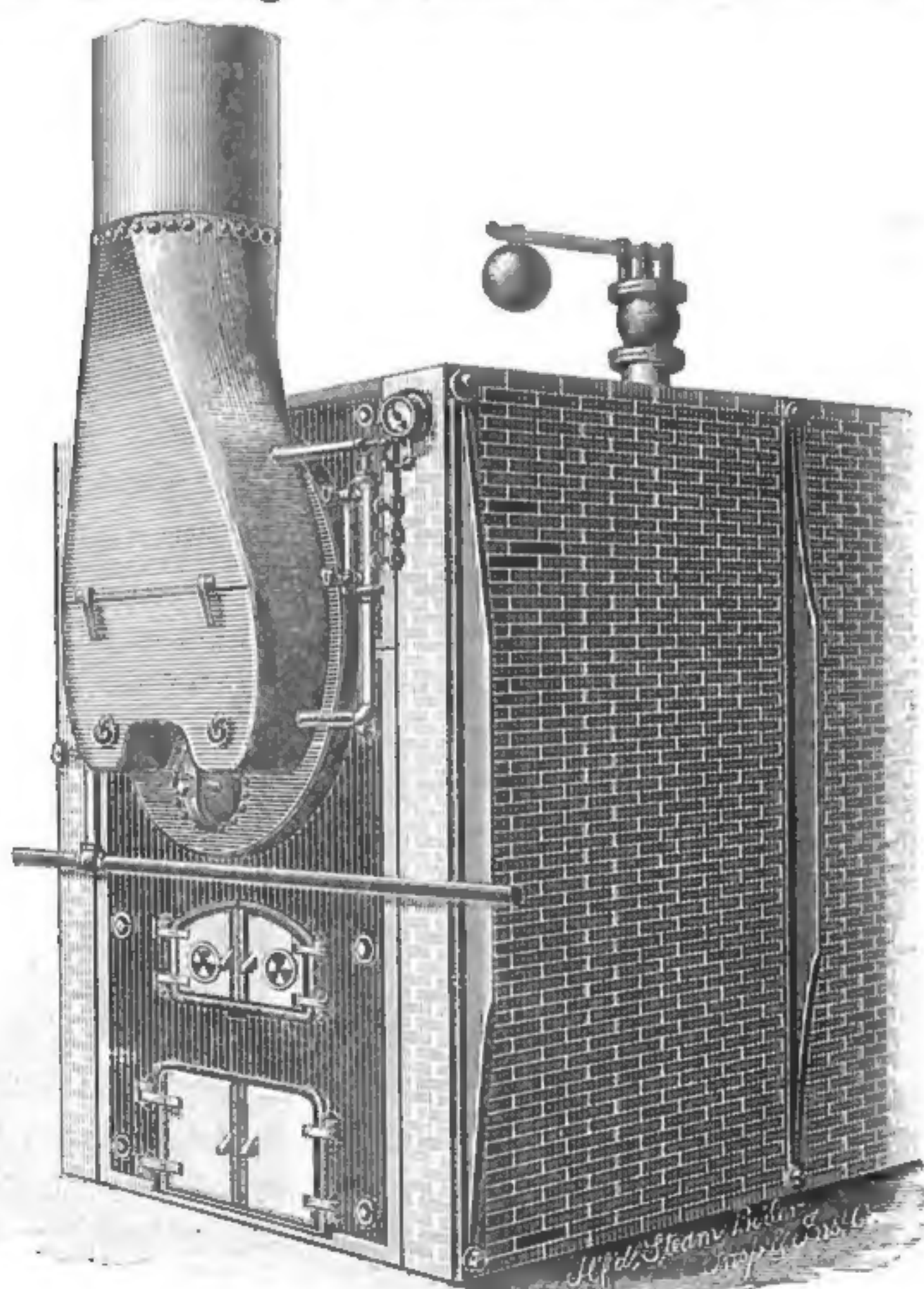


FIG. 7.—A BOILER WITH BREECHING.

upward. However, there is no reason why the hinges should not be placed vertically on these fronts. On the other hand, when the doors are oblique, as in the cut-away front, it is not so easy to have them swing about vertical hinges. Such a hinge could be arranged, it is true, and we have seen them; but they must project from the boiler, and they are unsightly and in the way. The best way to arrange the tube-door in a cut-away front is to run the hinge

along the top of it horizontally, and to have the door open upward. But with such a disposition of things the door is not easy to handle, and, moreover, it must be supported in some way when it is open. For the purpose of support a hook and chain, hanging from the roof, should be provided; but there is a tendency among the firemen to prop up such a door with a piece of scantling, even when the chain is provided. The hook is not easy to reach or to manipulate, and a scantling is in every respect, save one, equal to it. In working about a door thus propped open, there is an excellent opportunity accidentally to kick out the prop and let the door come down on the workman, doing him very grave injury and perhaps killing him. It may be said that this accident does not often happen. That is true, and yet it is a good plan to make it impossible that it should happen, by using doors with vertical hinges. Fig. 7 shows a boiler, the setting of which is similar in general design to those represented in Figs. 3 and 5, except that in the place of a cast-iron front it has bolted to it a short iron breeching that comes down over the tubes and receives the gases of combustion from them. In Fig. 7 a man-hole is shown under the tubes. This, of course, is not an essential feature of the breeching, but it will be seen that man-holes can readily be put below the tubes on fronts of this kind, in such manner as to be very convenient of access.

POINTS IN MILLING.

AGAIN a sapient technical writer pronounces the "crease dirt theory" a "wind theory." Well, admitting that the "theory" is mere "theory," what is the stuff that is found in the crease of the wheat-berry? In fifteen months, constantly meeting and talking with millers, I have not found a practical flour-maker who does not recognize dirt in the crease as "crease dirt." Yet the exceedingly technical writers declare that the seeable, smellable, touchable, tastable, non-floury substance in that crease is not crease dirt! So much the worse for the writers.

LATELY there has developed a craze for going to the extreme in naming machines and appliances. Machines that are designed to handle dusty material are called "dustless." Metal that is used in bearings is named "anti-friction." What is the sense or profit in using such terms? Are they not misstatements? Do they not imply an impossibility, to say nothing of mere improbability? I have seen a "dustless" machine in operation, within the past week, that was quite as dusty as anything ever used in the same operation in a mill. In the same plant I saw serious bother with bearings that were made of "anti-friction metal," warranted "never to heat under any circumstances." The discovery gave me new ideas of the wide gulf between preposterous claims and actual achievements.

Is 4:30, or even 4:40, a high enough reckoning for wheat in a modern mill that caters to the better trade? Ordinarily 4½ bushels of wheat are counted equal to a barrel of flour, but there is reason for thinking that, taking a seasons' run in a good mill, with careful milling, on average wheat, with a record of receipts and sales of flour accurately kept, the score will run very close to 5 bushels of wheat for a barrel of flour. Only last week a well-known winter-wheat miller, who grinds large amounts, told me that his record of wheat received and flour made, on the grain of the 1889 crop, called for a figure so close to 5 bushels that he was content to let it go at that. This extra part of a bushel, not generally included in statistics, may explain the seeming mysterious discrepancies in "visible supply," and so on. Conceive the 75,000,000 barrels of flour made in the United States yearly to be reckoned at 4:30. That would call for 337,500,000 bushels of wheat. Suppose the average really to be 5 bushels to the barrel. That would call for 37,500,000 bushels more of wheat than the usual 4:30 calls for, and it would explain the often inexplicable disappearance of reserves.

I FIND spring-wheat millers who are willing to admit that 4:30 is too low for a season's run. They say that if the

wheat is uniform, all fine, all plump, all solid, 4:30 may do, but they assert that even the most careful buying can not avail to prevent occasional intrusions of off-grade, shriveled, shrunken, wrinkled, hollow, chaffy grain in considerable proportions, and all such intrusions make havoc with "big yields" that is not easily repaired. Where a mill grinds from 800 to 10,000 bushels of wheat daily, it is a matter of course that some of the grain will not be up to the highest grade.

VOTING BY CAPACITY.

Ex-Secretary Seamans, who, we are quite credibly informed, is the responsible author of whatever editorial, not stolen or paraphrased, that has recently appeared in a Milwaukee publication that flaunts on its title page the word "Miller" as proof of misrepresentation, undertakes seriously to explain what every milling journal more fully and clearly explained a year ago, the voting by capacity clause. He says:

"In the first place, although the capacity vote has governed the association for the past twelve years, it has never once been called into use, and probably never will be. In case it should, however, the votes must be according to capacity by States, each state being entitled to as many votes as a State, as its members have units of representation in the national association; and still the vote may be viva voce, so far as the states are concerned. Yet the "Alleged M. J.'s" continue to howl about "non recognition of the State organization."

The "Alleged M. J.'s" clearly explained that voting by States on the barrel capacity clause give virtual control to Minnesota and Wisconsin, thus making the association purely a sectional concern, which it notoriously has been, and yet remains. There is exactly where the African in the wood-pile is located. Compare the capacity element of Minnesota with any other State, and see where the rest would come out. They would appear just where they have appeared, in the attenuated extremity of the bovine induration, otherwise known as the little end of the horn. By it the State organizations are reduced to a farce.—*Indianapolis "Millstone."*

TESTING VARIETIES OF WHEAT.

During the past season the Ohio Agricultural Experiment Station made thorough tests of a number of wheats, to determine which are the most prolific, which stand the winter best, and which suffer least from smut. The tests were made on a 7-acre piece of bottom land, and each variety of wheat had a plot of ground containing a tenth of an acre. The bulletin issued by the station gives the following results:

Plot No.	Variety.	bu. yield per acre.	Per cent. Winter killed.	Smutted, per cent.	Plot No.	Variety.	bu. yield per acre.	Per cent. Winter killed.	Smutted, per cent.
1	Wyandotte....	34.70	20	2	29	Seneca Chief..	31.04	35	1
2	Velvet Chaff..	31.50	20	2	30	Velvet Chaff..	35.25	15	0
3	Farquhar.....	29.45	18	10	31	Sheriff.....	27.91	15	2
4	McQuay.....	33.58	23	10	32	Big English....	28.91	17	2
5	Mediterranean.	29.33	25	1	33	Tascan Island..	25.23	12	1
6	Sibley's New Golden	28.53	42	0	34	Surprise.....	29.33	12	0
7	Tasmanian Red	29.29	35	1	35	Royal Australian	32.66	10	0
8	Gypsy.....	29.50	25	2	36	Golden Prolific	32.75	15	5
9	Democrat.....	30.41	22	0	37	Red Brazilian..	32.33	35	0
10	Dietz.....	31.93	25	1	38	Red Russian...	19.41	85	1
11	Reliable.....	36.16	25	2	39	Finley.....	36.00	25	1
12	Valley.....	36.16	30	1	40	Fultz.....	34.20	25	0
13	Egyptian.....	34.00	25	1	41	Hicks.....	34.66	3	1
15	Patagonian Trigo	17.50	85	2	42	Rocky Mount'n	27.53	22	0
16	Red Fultz.....	32.50	33	2	45	High Grade....	29.12	22	0
17	Poole.....	29.66	35	2	46	Ontario Wonder	25.08	5	10
18	Michigan Amber	31.08	33	2	47	Currell's Prolific	31.83	10	1
19	Vitter.....	24.16	45	1	48	Mealy.....	31.08	8	3
20	German Emperor	30.06	30	2	49	Improved Rice..	27.45	50	0
21	Hungarian.....	23.33	12	15	50	Ex. Early Onkley	25.54	60	2
22	Geneva.....	26.29	12	2	51	Silver Chaff....	29.58	10	1
23	Nigger.....	31.75	12	1	52	Martin's Amber	29.12	10	0
24	Diehl Mediterranean	27.50	30	1	53	New Monarch..	21.66	17	25
25	Miller's Prolific	23.00	7	1	54	Theiss.....	25.41	12	0
27	Golden Cross..	30.00	40	1	55	Oregon.....	26.63	17	0
28	Mo. Blue Stem.	32.16	35	2					

All the varieties were badly damaged by the severe freeze in March. Of the varieties named, Sibley's New Golden and

Tasmanian Red appear to be identical with Mediterranean. Reliable, Valley and Egyptian resemble one another very closely while growing, but show slight differences in the grain. Red Fultz and German Emperor seem to be simply new names for the old Michigan amber. Poole resembles them closely, but is slightly earlier, has a shorter straw and a more drooping head. Hungarian and Geneva can not be distinguished in the field; the one, however, is very smutty, the other not so. Diehl-Mediterranean, Golden Cross, Missouri Blue Stem and Seneca Chief are also identical. We also have the same wheat under the names of Raub's Black Prolific, Michigan Bronze, Brady Lake and Andrew's No. 4. Royal Australian is simply the old Clawson. Finley is another name for Fultz. We also have Fultz under numerous other aliases in our complete general list of wheats, which comprises about 250 so-called varieties. The Indiana Agricultural Experiment Station, working in the same line, publishes the following table of yields of different wheats tested on the Purdue University farm:

Plot No.	Variety.	Yield per acre.	Plot No.	Variety.	Yield per acre.
1.	Velvet Chaff.....	37.4	19.	Sibley's Imperial.....	30.4
2.	Ontario Wonder.....	25.9	20.	Poole.....	36.6
3.	Velvet Chaff (white smooth)	22.8	21.	Golden Cross.....	26.1
4.	Hedge's Prolific.....	36.9	22.	Velvet Chaff.....	35.2
5.	Mealy.....	35.1	23.	German Emperor.....	39.1
6.	Currell's Prolific.....	33.0	24.	Raub's Black Prolific.....	27.3
7.	Wyandotte.....	32.1	25.	Original Red.....	37.3
8.	Velvet Chaff.....	33.6	26.	European.....	41.8
9.	Dietz Longberry.....	33.9	27.	New Monarch.....	28.7
10.	Velvet Chaff (brown smooth)	34.5	28.	Improved Rice.....	28.3
11.	Fulcaster.....	32.8	29.	Velvet Chaff.....	38.7
12.	Fultz.....	34.8	30.	Hermies Winter.....	*
13.	Egyptian.....	39.0	31.	Early Red Clawson.....	43.5
14.	Michigan Amber.....	34.0	32.	Hindoostan.....	15.9
15.	Velvet Chaff.....	33.3	33.	Lehigh No. 6.....	22.2
16.	Michigan Amber.....	35.0	34.	Reliable.....	27.4
17.	Velvet Chaff (white beard'd)	34.9	35.	Valley.....	27.5
18.	Red Fultz.....	36.2	36.	Velvet Chaff.....	34.3

*Not threshed because affected with "bunt."

Numbers 1, 8, 15, 22, 29 and 36 are duplicate parts of Velvet Chaff wheat.

MEDICINE IN BREAD.

Says the London, England, "British Baker, Confectioner and Purveyor": "We have received a sample loaf of a comparatively new bread, which bears the name of 'Tonic Bread.' It is manufactured by the Tonic Bread Company, 2 John Street, Bristol, under Dr. Cunningham's patent. The bread was three days old when it reached us, but was then fairly moist and in good eating condition. In taste there is nothing to distinguish it from first-class whole-meal bread, but it is to its medicinal value that we wish particularly to refer. The patent consists in the incorporation of certain valuable ingredients with whole-meal bread in such a manner that their presence can not be detected by the most delicate taste, while their remedial action is fully retained. These ingredients are cascara sagrada and euonymin, about 6 minims of the former and 3 minims of the latter to each pound of bread, diluted with water and well stirred into the liquor used in mixing the dough; they are thus thoroughly distributed over the whole mass and assist in the mechanical action of the bran. They act very beneficially on the liver and intestines. The bread is, therefore, well suited for those whose digestive organs are not of the best, and also for persons who suffer from torpidity of the liver and constipation. We understand that the bread has already received valuable testimony as to its efficacy in the relief of the diseases already referred to, and we are certainly of opinion that such an article of diet as 'Tonic Bread' is infinitely better as a medicine than the violent aperients so generally resorted to by those who suffer from indigestion and constipation. The bread is meeting with considerable favor in Bristol and neighborhood, and the company are now open to appoint agents in all parts of the country to make the bread, paying a royalty to the company by purchasing the 'Tonic' mixture from them. We imagine that an agency of this sort would be an acquisition to the business of bakers, particularly to those whose trade lies in the health resorts."

ALUM AND AMMONIA POWDERS.

Millers, bakers and bread-eaters will be equally interested in the following article from the New York "American Analyst" of August 28: "Several cases have been published in the newspapers recently of persons being poisoned, in some instances fatally, by ammonia. The harmful effects of that article are well known to both chemists and physicians, and the public should be on its guard against anything in the shape of a food preparation that contains it as an ingredient. Strange as it may appear it is nevertheless the fact that ammonia, as well as alum, is extensively used in the manufacture of baking-powders. For the information and guidance of our readers we have prepared a list that will be found below of the alum and ammonia baking-powders recorded as such in the official reports of the United States Government, the Canadian Government and the Food Commissioners of the States of Ohio, New Jersey and Massachusetts. The list is arranged alphabetically. Those to which a * is appended are evidently largely in use, as they are mentioned in three or more of the reports referred to. The list is as follows:

American Gilt Edged.	Four Ace.	Pearsons.
Aunt Sally.	Gem.	Perfection.
Brooks and McGeorge.	Geo. Washington.	Peerless.
Brunswick.	Globe.	Pride of Ottawa.
Buckeye.	Gold.	Pride of Toronto.
Burnett's Perfect.	Golden Sheaf.	Princess.
Can't Be Beat.	Grape.	Purity.
Capitol.	Great Eagle.	Royal.*
Carlton.	Henkol's.*	Scioto.
Centennial.	Higgins.	Silver Cream.
Challenge.	Holyoke.	Silver Queen.
Cook's Acme.	Hygienic.	Silver Spoon.
Cook's Best.	International.	Silver Star.*
Cook's Choice.	James.	Silver Thimble.
Cook's Favorite.	Jersey.	Snowdrift.
Cook's Finest.	Kenton.*	Sovereign.
Coral.	Lincoln.	Springfield.
Cottage.	London.	Star.
Crown.	Mason's.	State.
Crystal.	Metropolitan.	Standard.
Daisy.	Miles Premium.	Sterling.*
Davis O. K.*	Miles Prize.	Sun Flower.
Dixon's.	New Era.	Superior German.
Dooley's.	Ocean Foam.	Veteran.
Dry Yeast.	Ocean Wave.	Vienna.
Eclipse.	Old Colony.	Washington.
Empire.	One Spoon.	Welcome.
Enterprise.	On Top.	Wheeler's No. 15.
Eureka.	Oriole.	White Star.
Feather Weight.	Our Best.	Windsor.
Fleur de Lis.	Our Own.	Zipp's Grape Crystal.
Forest City.	Patapsco.*	

"There are many other adulterated baking-powders which have a small local sale. The Minnesota Dairy and Food Commission, for instance, gives the names of 41 not enumerated in the above list. But our readers must not imagine from the foregoing appalling category that there is no such thing as a pure baking-powder. The fact is that the wholesome leavening power of a baking-powder is produced by cream-of-tartar and soda. Those articles are comparatively expensive, and the dishonest and unscrupulous manufacturer sees larger profit by replacing them with cheaper ingredients, regardless of the injury the use of the latter is calculated to involve. But there are honest manufacturers of pure cream-of-tartar baking-powder, who not only use only the purest and most desirable material in its composition, but who announce on the printed label on each package the names of the ingredients. One further word of caution to house-keepers: Every baking-powder sold with a prize or a gift is almost certain to contain alum or ammonia, and often both."

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Practical Notes

COLD WATER IN THE SEA.—Late investigations have proved that the majority of deep-sea depressions come from other than volcanic origin, and that the coldest waters of the ocean stand in the deep troughs instead of running, as was formerly thought to be the case.

GENERAL NOTES.

EFFORTS to get the French and German governments to remove their embargo on American pork are bearing fruit. The French journal, "La France," commenting on the rumor that the measure proposed in the United States to exclude French goods is one of retaliation, and that the United States seriously contemplates the prohibition of all adulterated French wines, says that, as there is scarcely a single bottle of wine produced in France which is not manipulated with plaster-of-Paris or other extraneous substances, such a measure will exclude all French wines from the market of the States, and the journal warns the French that they would better come to terms with America, since it offers reciprocity.

COTEMPORARY COMMENT.

It is conceded that much wheat is irreparably injured by the wet weather in Manitoba, and sprouted, damp and musty grain will be only too common.—*Minneapolis "Market Record."*

When a business young man spends the most of his time in pool-rooms, it is time to increase his salary or examine his accounts.—*Chicago "Daily Business."*

The "Modern Miller," quoting from that shrewdly-constructed document, the new constitution of the Millers' National Association, states it thus: Section 5. In transacting the business of this association in convention, all voting shall be by viva voce, unless a vote by capacity is demanded, in which event voting shall be by staves, each state being entitled to one vote for each ten units or fraction thereof, of its membership in this association. We thought the barrel clause bad enough, and are prepared to see in this a subtle move by our friends, the enemy, for a compromise, on the principle to claim the whole suit and then compromise on the breeches. If the question has come to be representation by staves, we will take refuge behind the barrel.—*Indianapolis "Millstone."*

THE SHIPS OF THE WORLD.

According to the latest official compilation, the number and tonnage of all the sea-going steam and sailing vessels of all the nations of the world, at the close of the year 1889, were as follows:

	Sailing Vessels.		Steam Vessels.	
	No. of Vessels	Tonnage.	No. of Vessels	Tonnage.
Great Britain (United Kingdom)	3,593	2,467,512	5,574	7,774,644
Colonies.....	2,075	894,040	829	461,210
	5,668	3,361,252	6,403	8,235,854
Norway.....	2,974	1,337,686	395	246,669
United States of America.....	2,856	1,306,488	416	517,394
Germany.....	1,135	640,400	741	928,911
Italy.....	1,343	515,942	212	300,625
Sweden.....	999	294,183	471	181,781
Russia.....	945	271,265	136	156,070
France.....	854	235,504	526	809,598
Greece.....	879	223,801	92	83,839
Netherlands.....	382	161,762	162	217,022
Turkey.....	813	158,170	94	71,607
Denmark.....	591	120,993	217	159,072
Spain.....	494	119,994	389	414,817
Austria.....	238	118,482	130	151,166
Brazil.....	385	81,359	121	67,707
Chili.....	123	71,457	29	30,934
Portugal.....	173	46,501	43	44,701
Japan.....	124	33,123	165	138,431
Argentina.....	70	21,897	56	21,245
Peru.....	35	8,860	2	2,188

Hawaii.....	10	5,567	17	13,838
Belgium.....	8	4,104	77	106,467
Siam.....	7	3,519	3	644
Mexico.....	16	3,308	16	7,733
Montenegro.....	17	3,282	..	....
Uruguay.....	11	2,903	20	9,111
Bolivia.....	3	2,302	..	....
China.....	7	1,282	35	44,548
Venezuela.....	7	1,123	6	2,635
Hayti.....	5	989	8	3,401
Colombia.....	2	444	..	....
Roumania.....	2	407	3	529
Sarawak.....	1	347	6	2,269
Costa Rica.....	1	288	2	528
Persia.....	..	....	1	838
Zanzibar.....	..	....	9	4,723
Other countries.....	12	7,295	9	8,467
Total.....	21,160	9,166,279	11,108	12,985,372

Following is an official statement showing the comparative strength of the war navies of several of the leading nations of the earth at the present time:

	Britain.	U. S.	France.	Ger'y	Italy.	Russia
Number of first-class armor-clads (18-in. armor and above).....	19	..	13	..	10	7
Other sea-going armor-clads.....	41	..	27	16	11	17
Cruisers and sloops (above 900 tons).....	166	47	63	35	22	32
Gun vessels (over 600 tons).....	47	3	11	4	17	4
Gun boats over (200 tons).....	81	2	37	10	22	14
War vessels over 14 knots.....	169	19	75	44	56	28
Merchant ships to each cruiser or sloop.....	39	9	8	21	10	7
Merchant tonnage to each cruiser or sloop.....	49,000	11,000	13,000	26,500	13,600	5,000
Merchant ships to each war vessel.....	38	22	7	17	4	8

The relative extent of coast line to defend also forms an element in the comparative strength of the fleets, and here again Great Britain shows a deficiency, owing to the widespread character of the empire. Speed is of strategic importance, and some figures on this score may be given:

	Britain.	France.	Ger'm'y.	Italy.	Total inc. other Nations.
Over 20 knots:					
Number.....	50	5	2	17	94
Tons displacement.....	185,900	24,280	640	12,390	223,668
Number of guns.....	290	48	....	16	350
Over 19 knots:					
Number.....	24	10	9	3	61
Tons displacement.....	95,510	30,080	10,870	7,900	208,210
Tons.....	196	58	10	26	375
Over 18 knots:					
Number.....	9	11	3	9	91
Tons displacement.....	46,660	4,980	57,280	71,310	232,800
Tons.....	107	5	56	72	364

The largest vessels included in the British total of 20-knot ships are the "Blake" and "Blenheim," of 9,000 tons and 22 knots speed, with 94-inch guns. France's largest will be the cruisers "Dupuy de Lome" and "Amiral Jaures," 6,360 tons and 20 knots speed. The latter two vessels are being built at Brest and Rochefort respectively. Germany has two small torpedo catchers of 22 knots, and Italy several of 21, speed, while Austria has three of 23 knots speed. Spain is building several large cruisers of 20 knot speed, and has the "Reina Regente" of 21 knots speed, and two sister ships incomplete. It seems only natural to state that 16 merchant vessels are given as able to steam at a speed of over 19 knots, several of them at 21 knots, and others are forthcoming. Of this number nine are Atlantic vessels, three Hamburg-American liners, two White Star, two Inman and two Cunard liners.

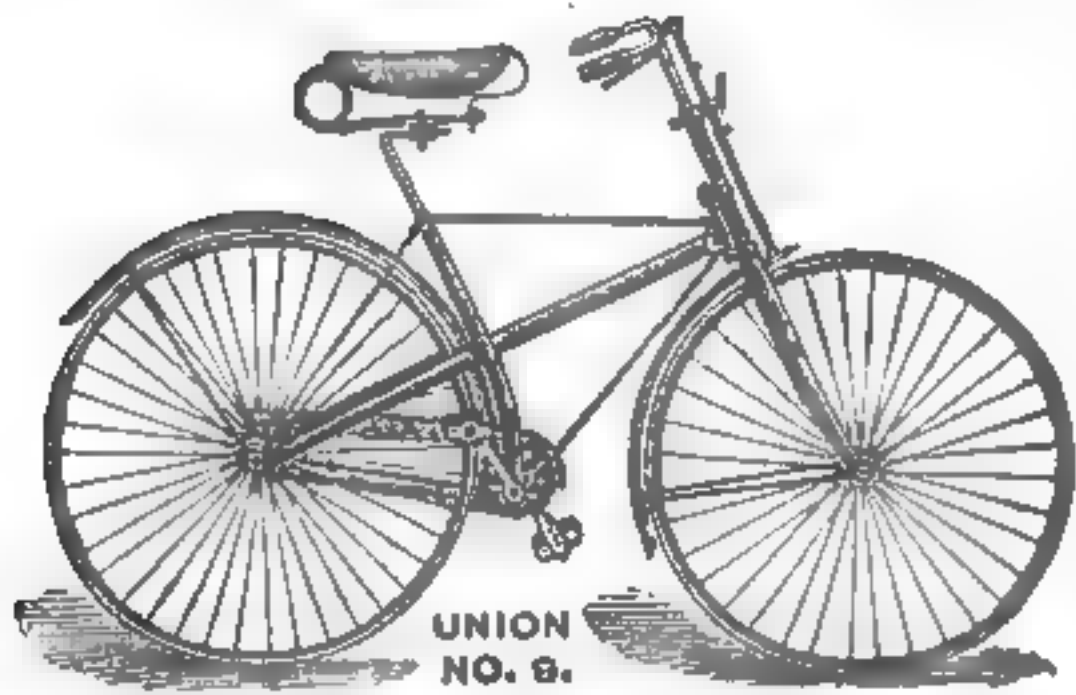
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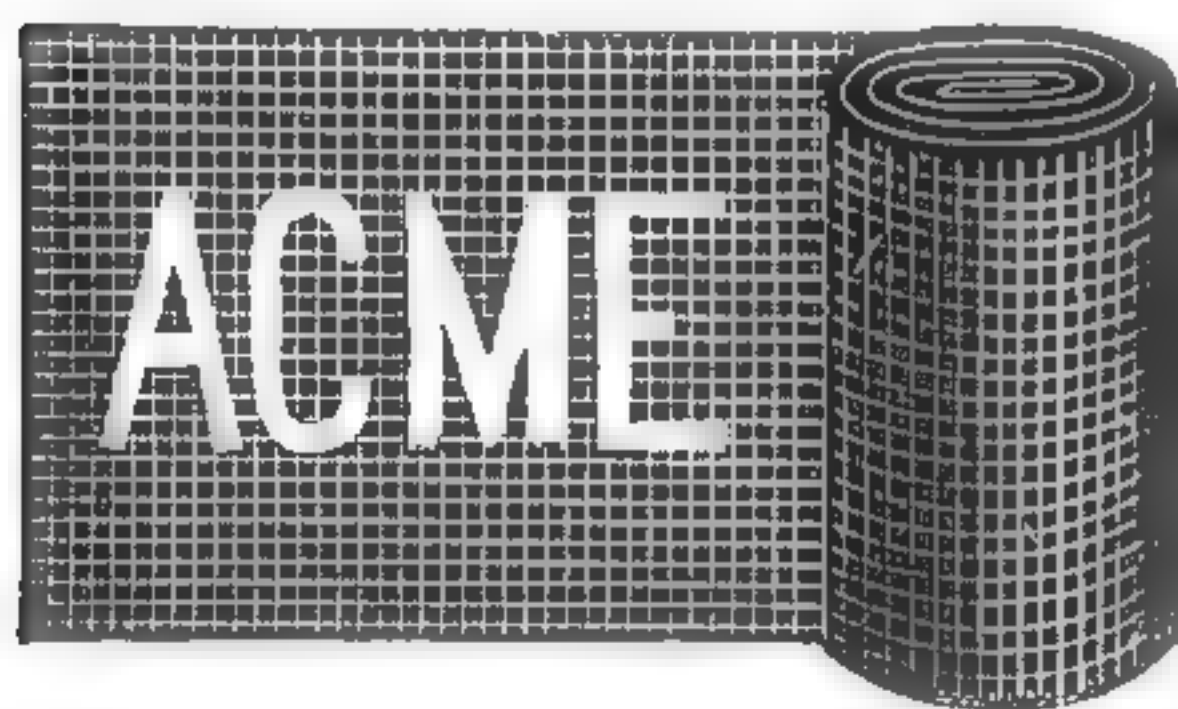
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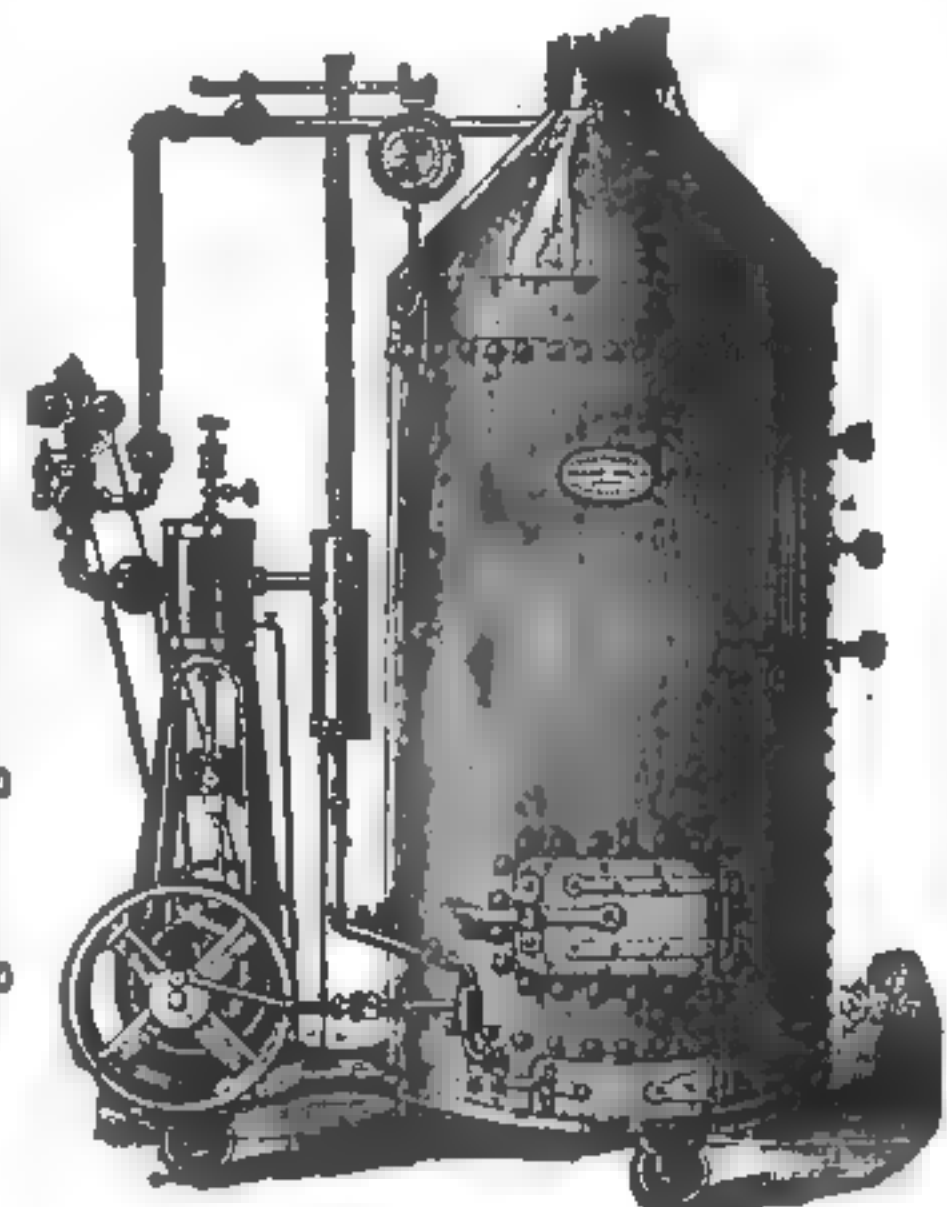
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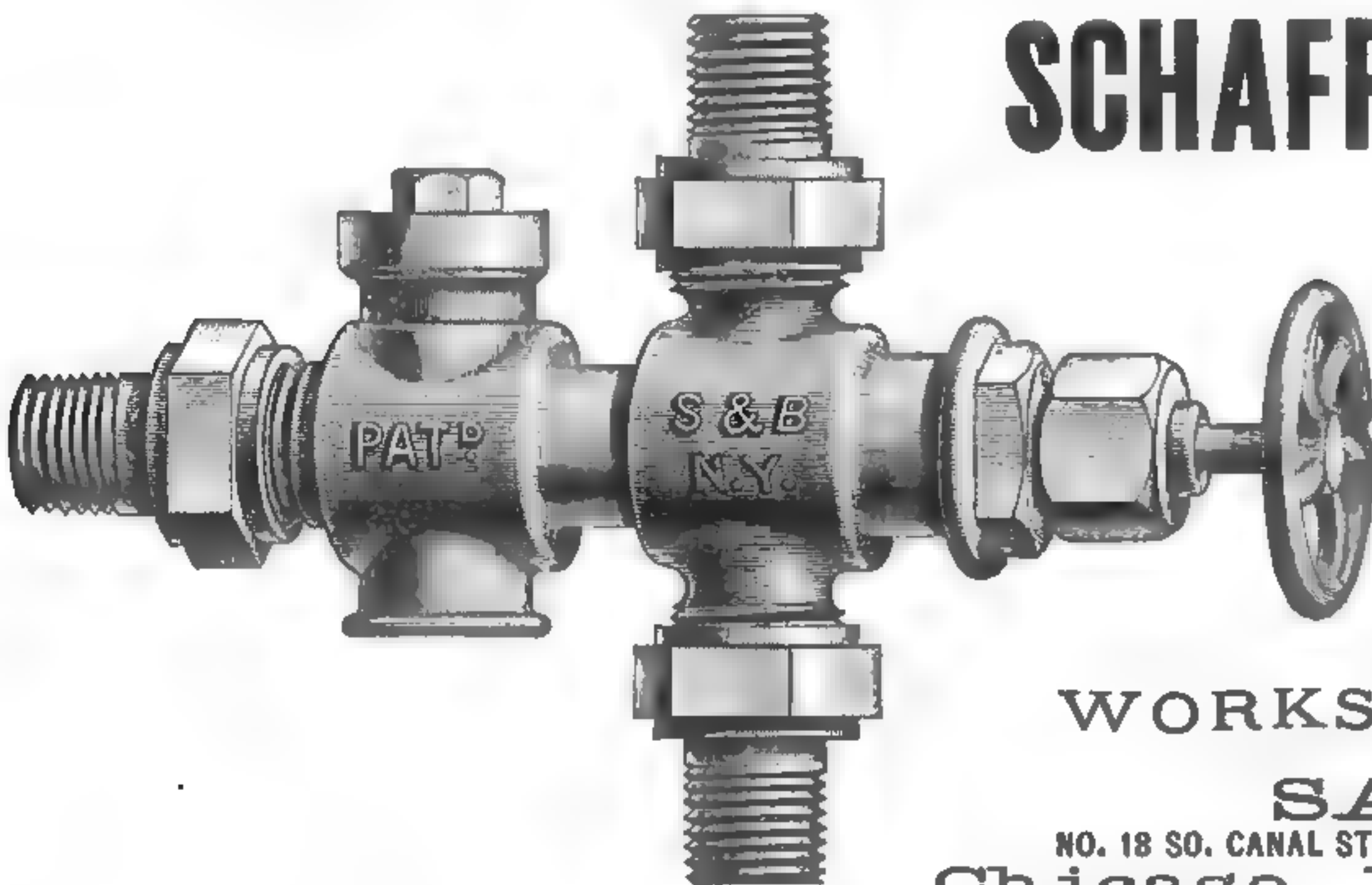
ARMITAGE, HERSCHELL & CO.

Tonawanda N. Y.

Sometimes Corrugated Iron is represented to be "just as good as" our Patent Edge Corrugation. While this is complimentary to our material, unfortunately it does not work out well in practice. The only Corrugated Iron that can be recommended for roofing is manufactured by

The Cincinnati Corrugating Co.

PIQUA, OHIO.



SCHAFFER & BUDENBERG,

—MANUFACTURERS OF—

Pressure Gauges for all Purposes

ENGINE COUNTERS AND REGISTERS.

IMPROVED RESTARTING INJECTORS
AND EXHAUST STEAM INJECTORS.

PYROMETER AND THERMOMETER, STEAM TRAPS, REDUCING VALVES, AND ENGINE AND BOILER APPLIANCES IN GENERAL.

WORKS AT BROOKLYN, N. Y.

SALESROOMS:

NO. 18 SO. CANAL ST.,
Chicago, Ill.

NO. 40 JOHN STREET,
New York.



E. Wicks, miller, Greene, Pa., assigned.
 Greenville, Ala., men build a flour-mill.
 Mondovi, Wash., men build a flour-mill.
 B. F. Wilcox, Rochelle, Ga., builds a grist-mill.
 H. A. Edwards, Bridgeton, N. J., builds a grist-mill.
 Barnum & McCullum, Shiloh, La., build a grist-mill.
 H. C. & W. A. Wald, Liberty, Ala., build a grist-mill.
 The New Albany, Kan., flour-mill is being enlarged and remodeled.
 C. C. Lodwick, Greenbush, N. C., builds a 100-barrel roller rye mill.
 S. Fray, Flemington, W. Va., builds a 40-barrel roller flouring-mill.
 The Farmers' Alliance, Graham, Tex., project a large roller flouring-mill.
 The Hawkinsville, Ga., Gin & Milling Co. sold their grist-mill to O. A. Horne.
 Wm. Green's grain-elevator, Carlisle, O., burned; loss \$6,000; fully insured.
 H. J. Benson's flouring-mill, Union, Ia., burned; loss \$50,000; insurance \$10,000.
 Staples & Hickley, Saratoga, Kan., change their flour-mill from 5 to 3 breaks.
 Shelan, Bean & Co., Bardstown, Ky., are putting in new flouring machinery.
 Bennett & Castleman, Simmon's Bluff, Tenn., have built a roller flouring-mill.
 J. B. Crawford, Nittany, Pa., remodels his mill to rolls with 25-barrels capacity.
 J. C. Terrill, Allensville, Ky., has formed a stock company to build a flour-mill.
 J. Klingensmith, Kittanning, Pa., builds a roller feed and buckwheat milling plant.
 W. E. Logan, West Asheville, N. C., wants new machinery for his flouring-mill.
 Bilbrey, Matthews & Co., Livingston, Tenn., are putting in new flouring machinery.
 J. B. Blades' roller flour-mill, Lawnwood, Mo., burned; loss \$10,000; insurance \$5,000.
 Reeves & Bradshaw, Elkton, Ky., improve their flouring-mill, adding new machinery.
 The Stanley, Va., Land & Furnace Co. have points on a projected roller flouring-mill.
 B. D. Lee & Co., Belton, Tex., will rebuild their burned flour-mill; machinery is wanted.
 Kansas reports indicate that there will be a considerable increase in the acreage of winter wheat.
 Hopkins & Tabb, Gloucester C. H., Va., build a 30-barrel roller flouring-mill on the short system.
 The Mason Milling, Ginning & Mfg. Co., Mason, Tex., rebuild the Knock flouring-mill; machinery is wanted.
 A. S. Clay and others, Marietta, Ga., incorporated the Kennesaw Milling Co., capital stock \$30,000, to build a flour-mill.
 Batesville, Ark., men have incorporated the Batesville Flouring Mill & Mfg. Co., capital stock \$25,000, to build a 75-barrel roller flouring-mill.
 An immense flour-mill will be built at St. Louis, Minn., a small town recently started several miles up the river from Duluth. It will be erected and operated by prominent Faribault and Duluth capitalists. Among the former is F. A. Bean. The mill will be 110x112 feet, six stories high,

and will be built of sandstone and brick. The capacity will be 1,500 barrels a day at the outset, which will be increased to 6,000.

Oliver Dalrymple, the bonanza wheat-grower of North Dakota, said on the 22d of September: "My wheat is threshing out from 18 to 20 bushels to the acre, and I have this year 25,000 acres under wheat at the average of 18 bushels to the acre. I will have a crop of 450,000 bushels of wheat, which grades, as far as threshed up to the present time, about one-third No. 1 hard, and the rest No. 1 Northern. I anticipate that the farmers are going to get very good prices for their wheat this year, for I do not believe that the average wheat yield for the United States for this year will be over 10½ bushels to the acre. The visible supply east of the Rocky Mountains this week shows a decrease, when there ought to be an increase of 200,000 bushels, and the result is that wheat has gone up a cent all over the country. I expect that prices are going to rise rather than fall in the future."

Says the Indianapolis *Millstone*: There has been a want, long-felt, that there should be a milling paper entirely devoted to the humorous side of milling. We are delighted to add that this want has been more than supplied. The cover of it is in the highest range of the visible spectrum, a vicious-looking violet. Its wit is of that serious order found in a concurrence of irregular but exalted ferments. Its title is the most humorous item of its matter, *The United States Miller and Milling Engineer*, on which subjects it is, of course, silent, and therefore the humor of it. Its last number was Vol. XV., No. 8, postoffice address, Milwaukee, Wis., price \$1 per year, but it has all the vigor and freshness of a publication to fortune and to fame unknown. Millers when they see it invariably laugh—that is what it is there for. If ground with the grain it would make a prime article of self-raising buckwheat flour. The following extract is a sterling sample of the quality of the wit, which like the charity of its contemporaries, is not strained:

Yet the "Alleged M. J.'s" continue to howl about "non-recognition of state organizations."

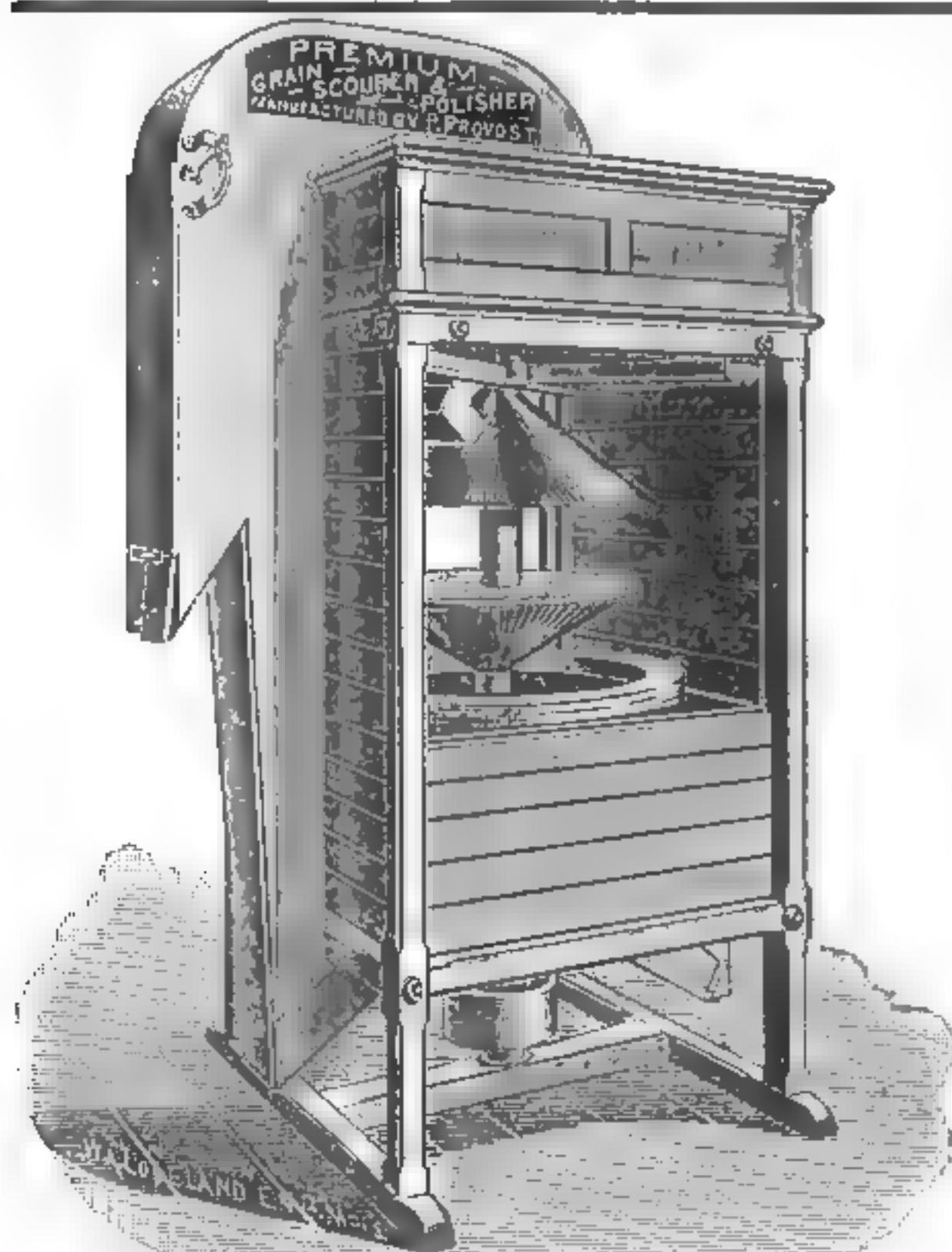
These alleged M. J.'s are all the milling papers in the United States.

"There is so much wit, and mirth, and spleen about thee
 There is no living with thee nor without thee."

BOOKS AND PAMPHLETS.

Good Housekeeping for September 27 opens with a valuable paper on "The Use and Care of Shoes"; having also special articles in relation to the toilet, window-gardening, wedding gifts and amateur entertainments, in addition to the recipes and suggestions for the benefit of the housekeeper, with which it always abounds. Mrs. Campbell has also a second paper in answer to the question "Why is there Objection to Domestic Service?" Clark W. Bryan & Co., Springfield, Mass.

The October *Scribner's Magazine* is a valuable number of that famous periodical. It opens with "The Lovers' Quarrel," a frontispiece, illustrating the selected ode of Horace. Then follow: "With a Cable Expedition," by Herbert Laws Webb; Horace, Book III., Ode IX.—"The Lovers' Quarrel," Mr. Gladstone's translation, reprinted by permission; "The City House in the West," by John W. Root; "Old Age," by C. P. Cranch; "Autumn Song," by Duncan Campbell Scott; "Jerry"—Part Second, Chapter IX-XII; "From Port to Port With the White Squadron," by Rufus Fairchild Zogbaum; "Revisiting a Green Nook," by Mrs. James T. Fields; "Nature and Man in America"—Second paper, by N. S. Shaler; "Vagrant Love"—A rondel, by Louise Chandler Moulton; "Fray Bento's Bell," by Charles Paul MacKie; "Wine of Lusitania," by Edith M. Thomas; "The Lake Country of New England," by Newman Smyth; "Sand-Waves at Henlopen and Hatteras," by John R. Spears; "5.59," by Charles F. Lummis; "The Private School for Girls," by Mrs. Sylvanus Reed; "The Point of View." A French View of American College Athletics—Ineligibilities of the Rich—A Study of Heirs—Sympathy in Authorship. Address Charles Scribner's Sons, 743 and 745 Broadway, New York, N. Y. One year \$3, single copies 25 cents.



THE PREMIUM GRAIN SCOURER AND POLISHER.

This machine is guaranteed to do more and better scouring than any other machine in existence. Is easily set up, requires little or no care, except oiling.

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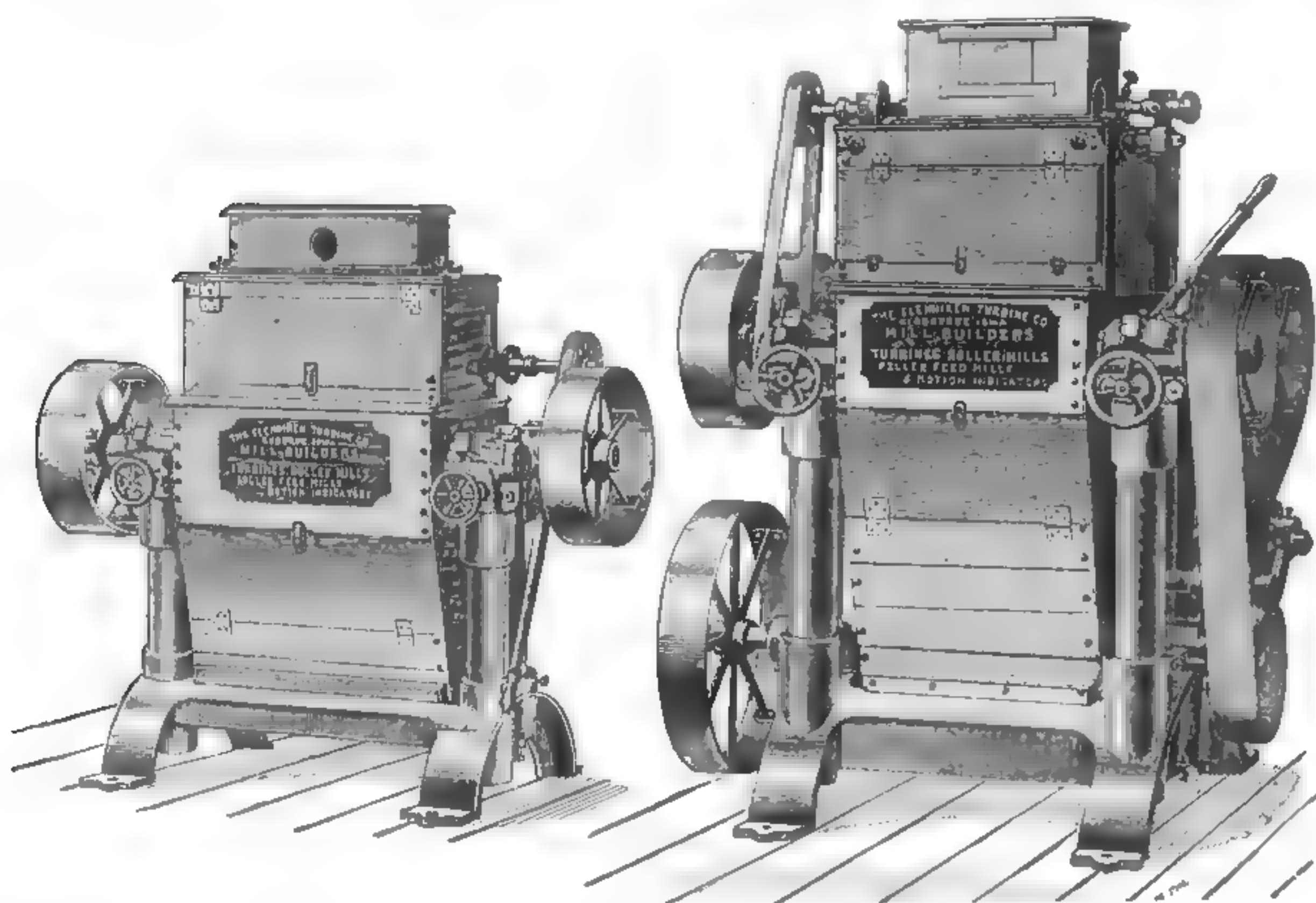
MINNEAPOLIS, MINN.

ONE REDUCTION TO THE FRONT!

*Ye jolly millers, one and all,
Who granulate with burrs,*

A Moses has Come to Deliver You from Egypt. Cease Trying to Make Bricks without Straw. The Red Sea of Expense Has Been Divided.

The Wilderness of Reductions has Been Shortened. There is Manna in Abundance for Those Who Believe. Listen to the Glad Tidings of Great Joy!



ONE REDUCTION ON ROLLS IS A SUCCESS! Two years of experience in a dozen States, with all kinds of Wheat and diversified climates, has justified us in recommending its adoption in place of burrs in each and every case, whether for grinding Wheat, Rye or Buckwheat. We have perfected Roller Mills, Bolts and Scalpers peculiarly adapted to the wants of Small Mills, and all our machines *infringe no patents*, and no claims are made that they do.

Having consummated a bargain with **MR. O. C. RITTER**, the author and patentee of **One Reduction**, which gives us the *exclusive right* to construct mills under his patents, our patrons in the future will receive a license from Mr. Ritter.

SPECIALTIES!

Graham Roller Mills, Round Reels and Scalpers, Sectional Round Reels, Grain Separators, Motion Indicators. Before buying any of these machines send for our prices and descriptive circulars.

SPECIALTIES!

Second-Hand Machinery, and Bargains in Every Line.

SEND FOR CATALOGUE OF

The Best Turbines!

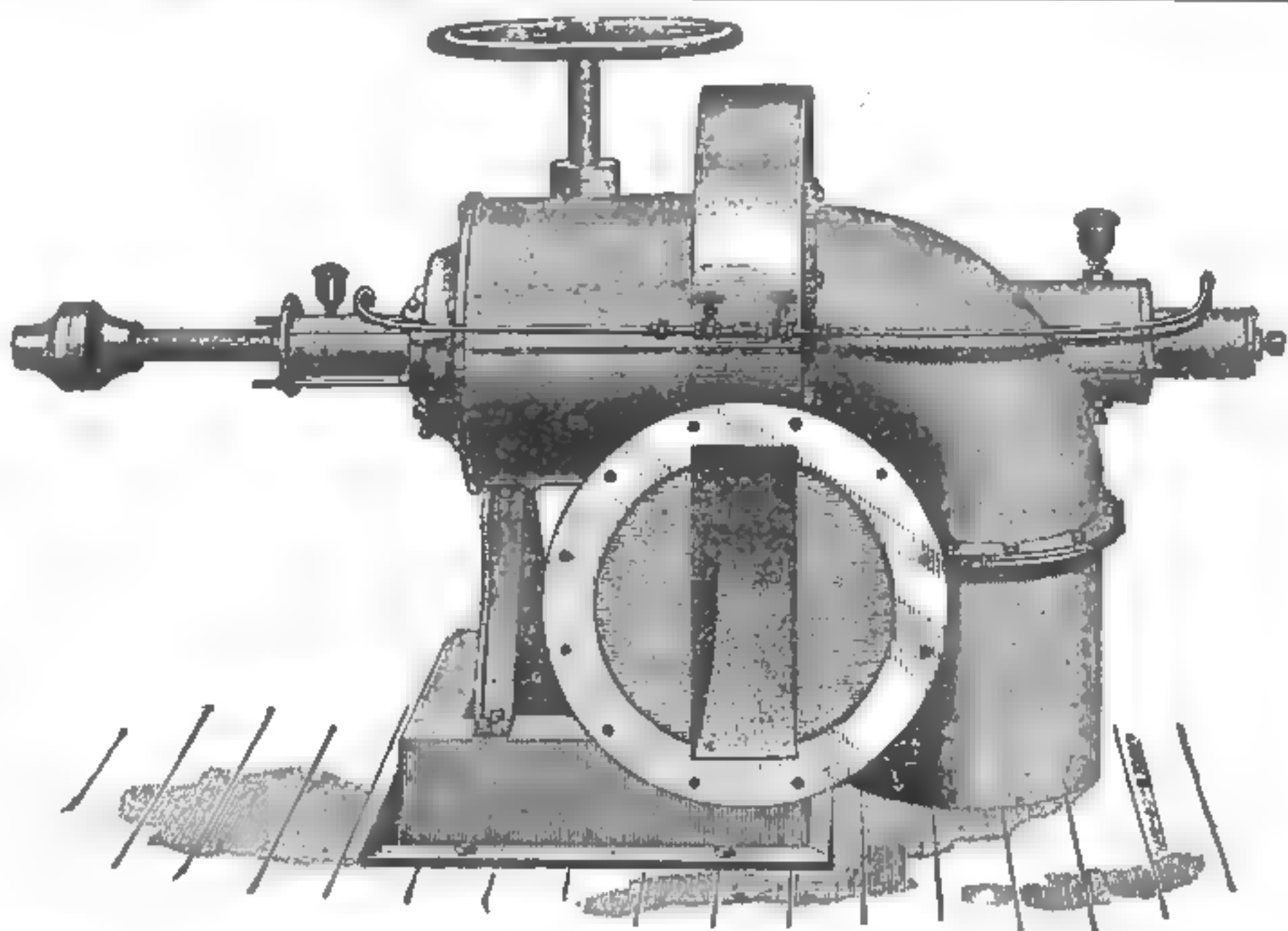
VERTICAL OR HORIZONTAL,

With or Without Iron Flumes,

—BUILT BY THE—

Flenniken Turbine Co.

DUBUQUE, - IOWA.



EUROPEAN ECHOES.

SEVEN out of every eight loaves of bread eaten in London are made from foreign wheat.

THE wheat crop of Italy is estimated at 120,000,000 bushels, against 100,000,000 a year ago.

WHEAT stocks in bond in the ports of France are only 1,600,000 bushels, against 6,840,000 bushels a year ago.

THE Paris "Bulletin des Halles" places the grindable amount of wheat from the present French crop at 278,000,000 bushels, and the import requirements for the coming year at 59,200,000 bushels.

A BRITISH report of September 6 says: There is sad disappointment in the yield of the wheat crop reported from South Russia this week; the quality is worse even than was expected, and according to some authorities the yield is not more than one-half of what was expected some time ago.

DURING the first seven months of 1890 the Belgian bakeries on the French frontier sent 35,670,190 pounds of bread into France. The flour sent in would pay a duty of \$1.60 per 220 pounds, while the bread pays only about 24 cents per 220 pounds.

AT a meeting of the Millers' National Union in Liverpool, England, on September 3d, J. H. Carter, of London, moved the following resolution, which was carried: "That in the opinion of this meeting every miller and others working in mills should be honest and join the Millers' National Union, No. 4 Branch." He said that he was glad to see that there were some master millers present, as it showed that it was not a hole-in-the-corner meeting. The masters themselves had a union, but it was called the National Association of Millers. A remarkable fact about their union was that, although it was formed to remedy their grievances, they had never since its formation once discussed the question of wages, which went to prove that the present rate of wage was not a grievance to them. Referring to trades unionism, he said the common complaint of capitalists and employers was that it had driven the trade away from the country. That statement was an entire fallacy. The exports of France last year were nearly \$850,000,000, Germany \$800,000,000 and the United States \$900,000,000, whereas in England, the home of trades-unionism, they amounted to \$1,850,000,000. And not only was the turnover larger, but the profits also, as shown by the Government returns of the income tax. He asked the trades-unionists present to take warning from the masters and not be lukewarm in their unions, and asked how could the Liverpool miller, working 60 hours a week, possibly be a "jolly miller?" They paid something like one-third or more of their wages for a wretched home, sometimes not in even a decent part of the city. Mr. Ure, of Glasgow, in speaking of the system of wages, advocated giving the millers rewards for any improvements they made in their mills.

SAYS the London "Miller:" Little comfort and less instruction seem likely to be afforded by the British naval maneuvers of 1890. The plan of operations was supposed to have been drawn up with a view to try the efficiency of our navy as a guardian during war of our merchant marine. The Admiralty was said to be anxious to devise some test whereby the immunity or otherwise of our ocean-borne food supplies and industrial raw material from capture by an enemy's cruisers could be approximately gaged. With this object one of the squadrons engaged in the maneuvers was ordered to consider itself a hostile fleet, and to beset a trade route with the object of harrying British commerce, while the fellow squadron was supposed to be the British fleet entrusted with the duty of looking for, engaging and dispersing the commerce-destroying squadron. Ten days were assigned for this mimic warfare. Well, the ten days came and went, and while the British fleet now hugged our

shores and now looked for the enemy, the latter was all the while as little in evidence as if he had been suddenly transported into the planet Mars. He had vanished into space like the Flying Dutchman, and was no more seen. What was equally strange, no tidings of his whereabouts were brought by traders who might be supposed to have crossed his track and have (hypothetically) fallen victims to his power. Thus, while the defending fleet was in the unenviable position of failing to discover the hostile cruiser it was bound to hunt out, engage and destroy, its foe was palpably neglecting its mission of harassing our merchant marine and snatching the bread out of our mouths and the supplies of raw material from our factories. Nearly a week after the conclusion of hostilities, news of the "enemy" was brought by an advanced vessel of the cruising squadron. Then it appeared that the "trade route" assigned by the naval authorities to the hostile fleet was no trade route at all. This way was in shape like a huge bell, tapering at the British or land extremity to a breadth of 50 miles, and widening out at the other end to 500, so that within its course were comprised many thousand square miles of salt water. Moreover, the lower part of the route was taken away far south to a point some 500 miles west of the coast of Morocco. So that the effect of the official plan has been to send the fleet, which should have represented the nimble hostile cruiser, a pleasant little trip into waters well out of the reach of either American or Indian trading ships. During the whole of this "cruise" the hostile squadron scarcely sighted, it is said, three small vessels. Under the circumstances the maneuvers have taught us less than nothing. It has, indeed, been demonstrated that a fast cruiser, or, to adopt the new nomenclature, "commerce destroyer," that should sally forth from Cherbourg or Cronstadt to prey on British merchant vessels, would be in serious difficulties with its coal supply in about ten days; but that fact was well known before, and can certainly not be placed to the credit side in the account of the late costly maneuvers. With regard to the conditions under which, in a war with a first-class, or even second-class, naval power, our food supply could be carried on we are no wiser than before. In other words, we are left with the uncomfortable certainty that at best our navy could not prevent a determined and well-equipped enemy from bringing dearth to our doors within a month of the declaration of hostilities. And if by any mischance a large proportion of our war vessels were to be crippled, the dearth would surely and quickly deepen into famine, unless these islands possessed a much better store of food than they now contain. If the late mimic naval operations did not result in any captures of merchant vessels bound for our shores, that was only because the maneuvers themselves were what Lord Wolseley so airily termed the "starvation theory," that is, "one vast and complete humbug!"

The matter of insurance is one of vital importance to millers and receives great consideration at their hands. We incline to the opinion that, were millers to secure smaller policies than has been the custom, and to place their insurance in a larger number of companies, the end sought to be accomplished would be more nearly attained.—*Chicago "American Miller."*

CATARRH.

CATARRHAL DEAFNESS—HAY FEVER.

A NEW HOME TREATMENT.

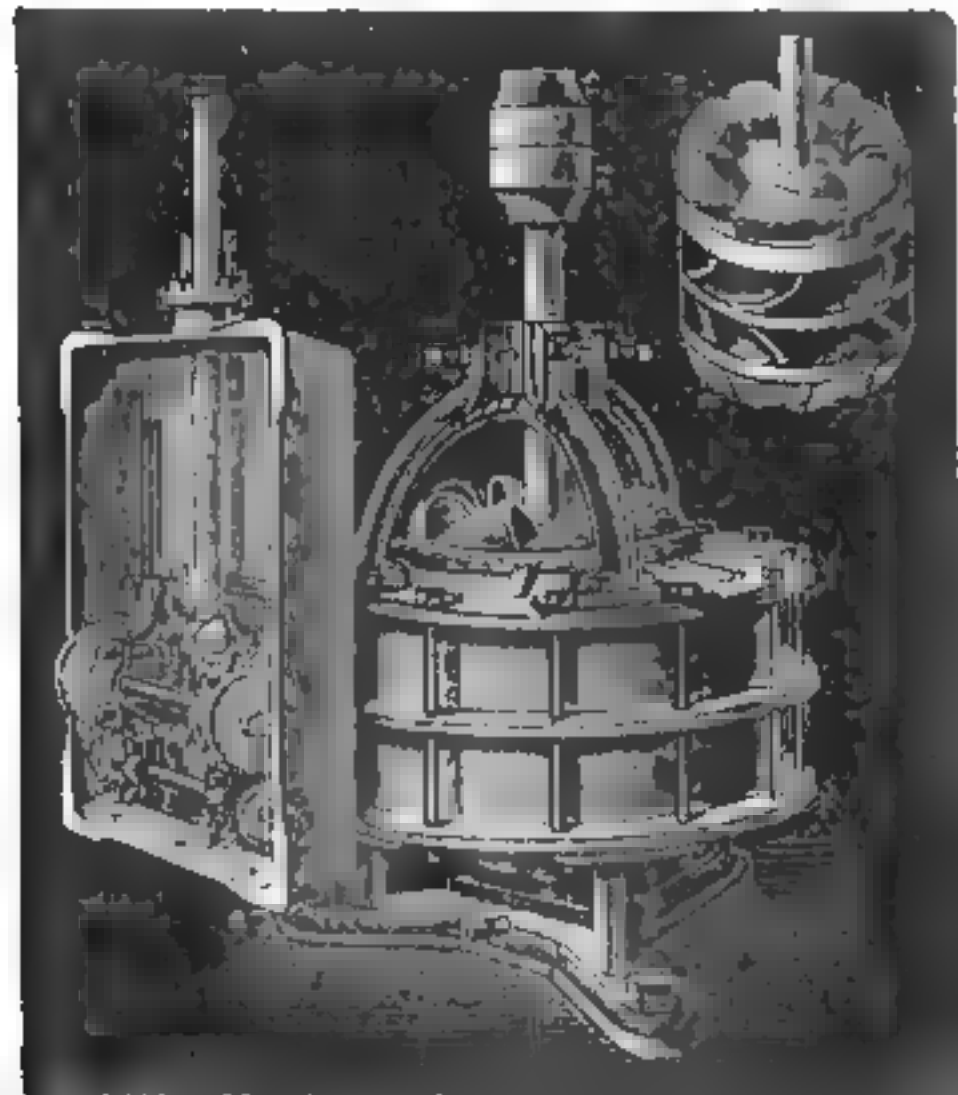
Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.

LITTLE GIANT WATER WHEEL

—MANUFACTURED BY—

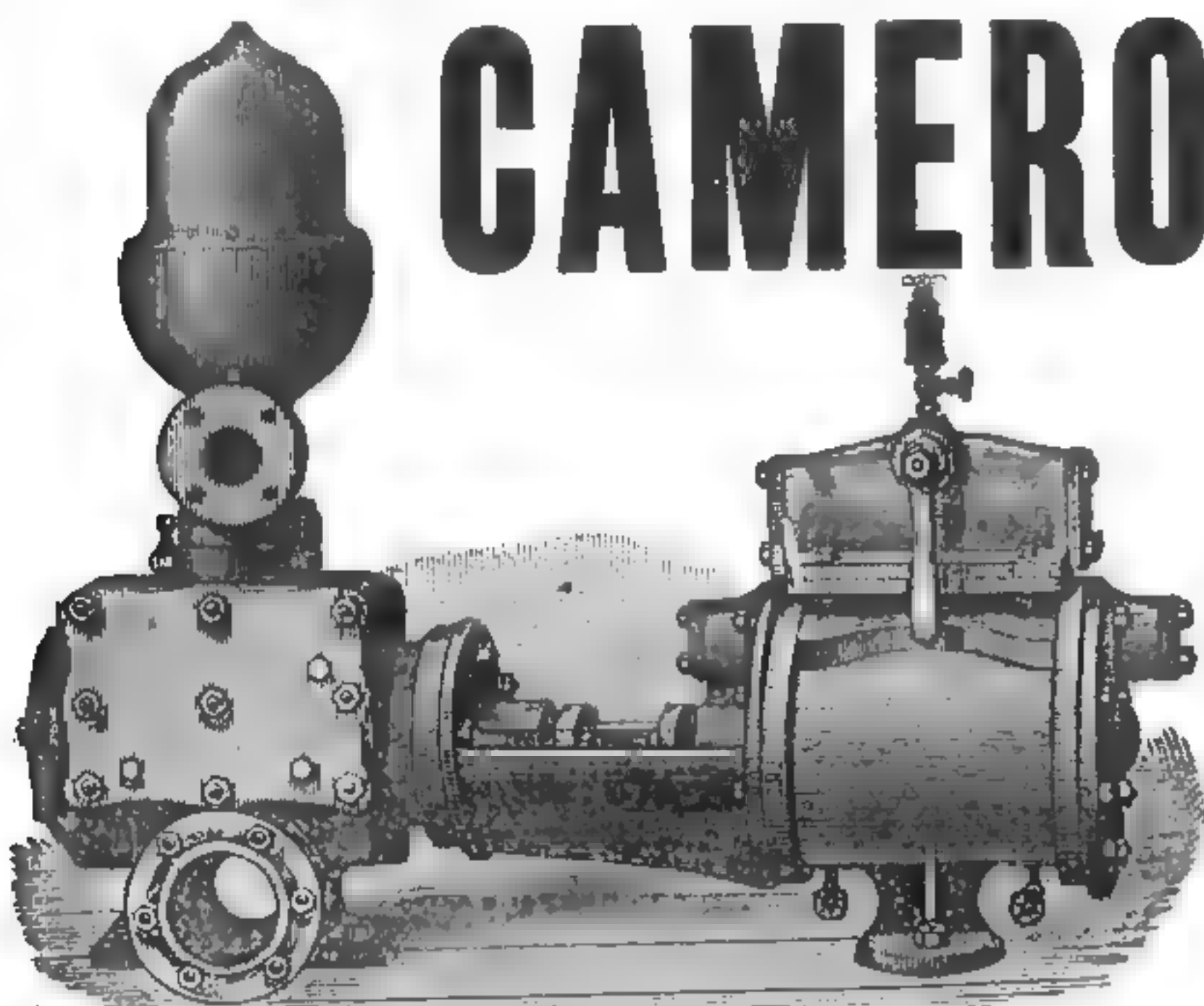


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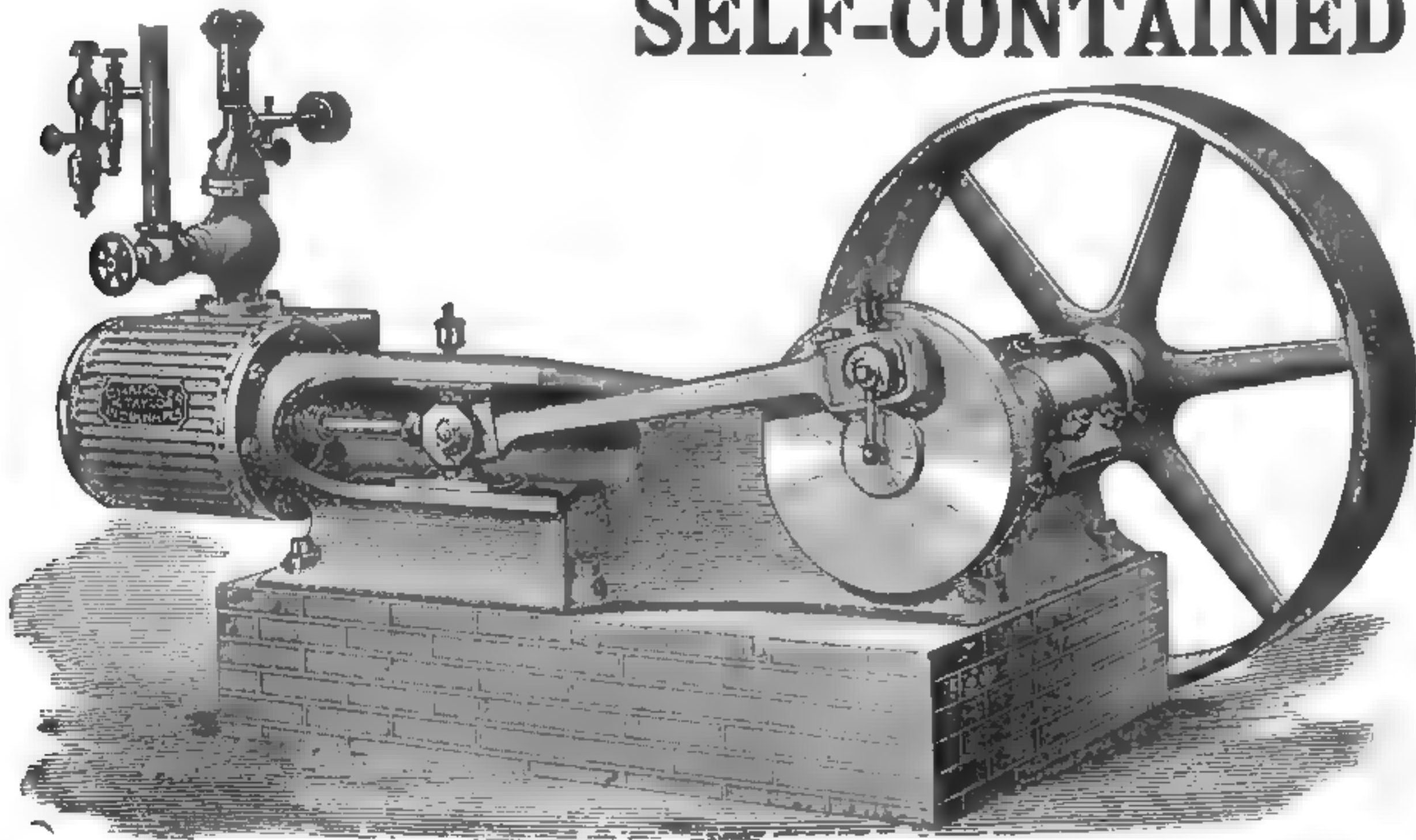
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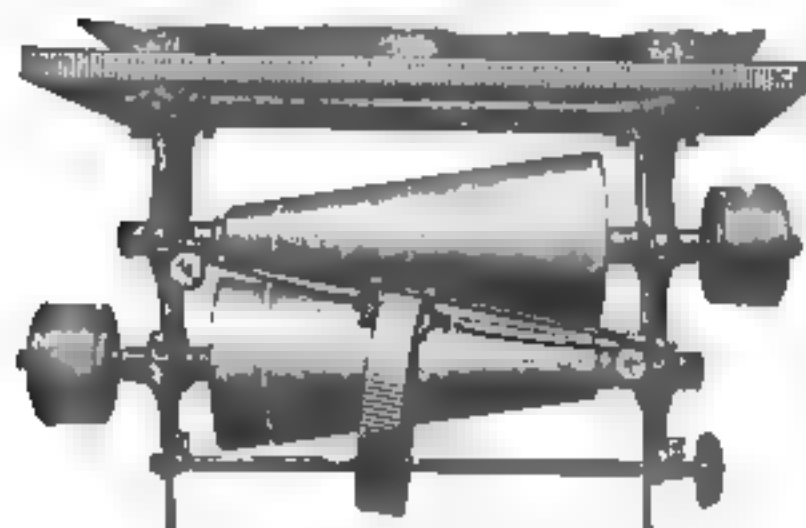
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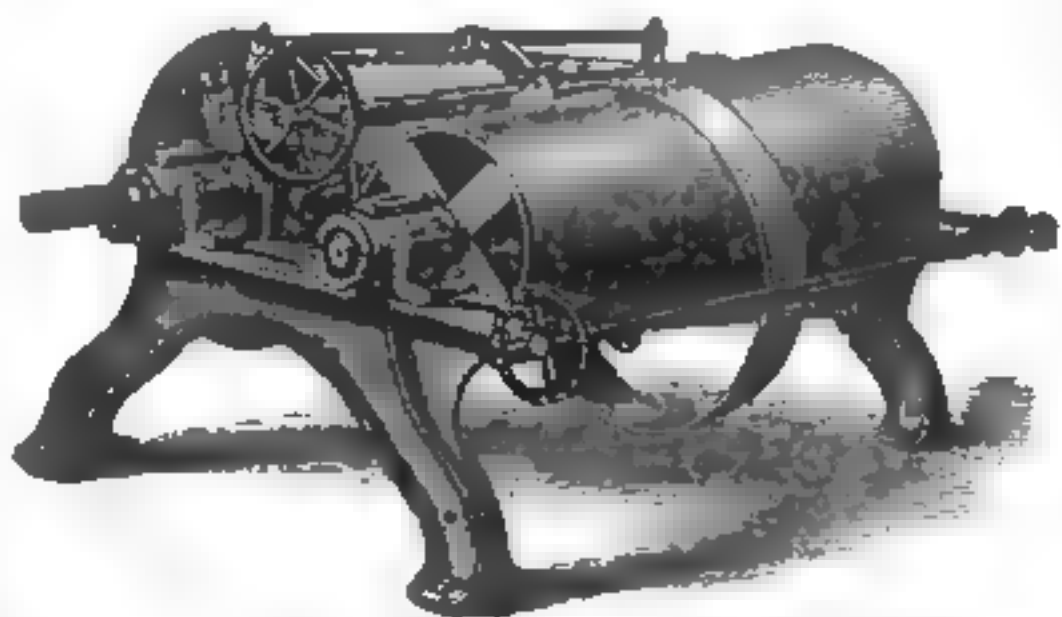
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Machinery a Specialty.

THE EVANS FRICTION CONE & FRICTIONAL GEARING

"PATENTED."



This cut represents a set of hanging cone pulleys. This pattern is intended for that class of machinery that stops and starts at the same speed, and at the same time be able to change the speed more or less while running. These cones are also fitted with a governor where a steady motion is required and the initial power is



fluctuating. All sizes made from 1/2 Horse Power to 50 Horse Power. SEND FOR ILLUSTRATED CATALOGUE.

EVANS FRICTION CONE CO., 85 Water St., BOSTON.

SHIPPERS
CAN SAVE TIME
AND TROUBLE
AND CASH
BY USING
BARLOW'S
PATENT
MANIFOLD
SHIPPING
BLANKS. SEND FOR
SAMPLE SHEET AND PRICES
BARLOW BROS. GRAND RAPIDS, MICH.



OFFICE OF THE MILLING WORLD,
BUFFALO, N. Y., Sept. 27, 1890.

Friday of last week brought dull and lower markets, on fine weather and higher crop estimates abroad, and larger receipts and offerings for home and foreign account. In New York September wheat closed at \$1.01½, with Atlantic port receipts 68,573, exports 6,218, and options 2,768,000 bushels. Russian crop estimates were raised somewhat. September corn closed at 55½c., with receipts 61,225, exports 67,106, and options 768,000 bushels. Frost in Nebraska corn-belt was reported. September oats closed at 44½c., with receipts 166,140, exports 20,324, and options 290,000 bushels. Wheat flour was dull and unchanged. On all grades below \$4.25 there was a scarcity that caused strength. The grades over \$4.25 and under \$5 were steady and in good demand, with a moderate supply. Receipts were 7,616 sacks and 42,208 barrels, and exports 4,000 sacks and 14,870 barrels. The minor lines were featureless.

Saturday brought dull and spiritless markets, on heavy western selling and eastern realizing. September wheat closed at \$1.01½, with receipts 96,853, exports 30,620, and options 976,000 bushels. Russian official estimates made an average wheat crop, or slightly above an average, while private reports admitted only an average, or slightly less. September corn closed at 55½c., with receipts 105,562, exports 26,076, and options 432,000 bushels. September oats closed at 44½c., with receipts 152,499, exports 28,127, and options 175,000 bushels. Wheat flour was generally weak. Receipts were 5,922 sacks and 25,896 barrels. The minor lines were featureless.

Monday was a day of more active and higher markets, on bulling in Chicago by Hutchinson, on moderate movement and on covering of shorts. September wheat closed at \$1.02¾, with receipts 81,144, exports 15,187, and options 3,776,000 bushels. Minneapolis millers, who hold the bulk of the grain of the 1889 crop, are asking 11c. more per bushel for it than for grain of the same grade of the 1890 crop. The reports all agree that the spring wheat in the Northwest is not running so high in No. 1 hard as the last crop. More goes into No. 1 Northern. September corn closed at 56½c., with receipts 203,777, exports 66,210, and options 1,200,000 bushels. September oats closed at 44½c., with receipts 274,564, exports 13,204, and options 260,000 bushels. Wheat flour was dull and unchanged. Receipts were 8,252 sacks and 41,427 barrels, and exports 6,317 sacks and 21,301 barrels. The minor lines were featureless. The visible supply in the United States and Canada was:

	1890.	1889.	1888.
	Sept. 20.	Sept. 21.	Sept. 22.
Wheat.....	17,640,439	17,196,572	31,041,175
Corn.....	8,506,335	12,632,727	9,960,609
Oats.....	4,179,747	5,928,570	5,927,979
Rye.....	539,905	1,182,895	679,974
Barley.....	1,344,470	474,832	256,452

Tuesday was a day of somewhat active markets. Bulling made a higher opening, but the advance was more than lost. September wheat closed at \$1.01½, with receipts 16,624, exports 53,000, and options 2,848,000 bushels. Northwestern signs indicated a larger movement. September corn closed at 55½c., with receipts 195,286, exports 65,152, and options 984,000 bushels. September oats closed at 44½c., with receipts 170,689, exports 20,812, and options 215,000 bushels. Wheat flour was dull, weak and lower to sell on all the grades above \$4.25. Below that figure the low-grades were scarce and firm. Receipts were 12,784 sacks and 46,443 barrels, and exports 8,308 sacks and 4,300 barrels.

The following shows the amount of wheat and

flour, together with the amount of corn on passage to United Kingdom, for ports of call or direct ports for the weeks mentioned:

	1890.	1890.	1890.
	Sept. 23.	Sept. 16.	Sept. 24.
Wh. & flour, qrs.	2,298,000	2,450,000	1,475,000
Corn, qrs.....	561,000	646,000	445,000

The following shows the amount of wheat and corn on passage to the Continent for the past week, the previous week, and for the same week last year:

	1890.	1890.	1889.
	Sept. 23.	Sept. 16.	Sept. 24.
Wheat, qrs....	695,000	629,000	290,000
Corn, qrs.....	122,000	154,000	101,000

India wheat to United Kingdom..... 40,000
India wheat to Continent..... 2,500

The imports into the United Kingdom for the past week and the previous week and for same week last year:

	1890.	1890.	1889.
	Sept. 24.	Sept. 16.	Sept. 24.
Wheat, qrs.....	552,000	307,000	363,000
Corn, qrs.....	211,000	181,000	143,000
Flour bbls.....	260,000	155,000	144,000

Wednesday was a day of dull, weak and generally off markets, on their own weight and absence of long or short supporting orders. Cables were easier. A non-official estimate increased the wheat supply east of the Rocky Mountains 632,000 bushels, corn 750,000 bushels and oats 376,000 bushels. September wheat closed at \$1.00½, with receipts 84,279, exports 22,497, and options 2,680,000 bushels. A western dispatch stated that 200,000 bushels of No. 1 hard had been shipped for export via Montreal, but the statement was considered unreliable, as Europe was at least 5c. below price here. September corn closed at 54½c., with receipts 199,384, exports 101,152, and options 936,000 bushels. September oats closed at 44½c., with receipts 148,079, exports 20,452, and options 145,000 bushels. Rye grain was nominally 68¢ for Western delivered in full loads, 70¢ for State do, and 66¢ for car lots on track. Barley was slack at 75¢ for Western, and 85¢ for Canada for the range of ungraded. Malt was dull and easy as follows: 75¢ for two-rowed, 80¢ for six-rowed, 85¢ for country-made Canada and 92½¢ for city do. Mill-feed was dull and easy at 85¢ for 40-lb., 90c. for 60 and 80-lb., and \$1.05 for 100-lb.

Wheat flour was slow and weak in New York, where buyers held off on account of the weakening by western millers. Spring patents were accumulating. Receipts were 5,516 sacks and 48,443 barrels, and exports 11,467 sacks and 11,107 barrels. Among sales were clear and straight Indianas at \$4.95 and \$5.25; fine winter in bbls., \$3.35; spring bakers', \$4.70; fancy patent Minneapolis sold at \$5.95; fancy patent springs late on Tuesday at \$6.00; winter straights were dull and weaker at \$5.00 to \$5.15 to sell all but fancy brands; clear do were easy also at \$4.75 to \$5.00. There were some new orders here for spring bakers' extras for export at within 10c. of reduced prices; city mills, in lots, at \$5.00; Southern straights at \$5. Large jobbers bid only \$5.60 for the best patent springs. At the close the whole market above \$4.75 was 5¢ to 10c. lower; below \$4.25 firm, and between the two barely steady, and all very dull; choice spring patents sold in a line to arrive at p. t., quoted at \$5.75 for standard brands

of old flour, and 1,500 city mill patents at \$5.60 in a line.

Rye flour was quoted slow at \$3.95 for fancy, \$3.75 to \$3.85 for standard, and \$3.50 for common. Corn products were quiet and easy as follows: Brandywine \$3.20; Southern and Western \$2.95 to \$3.20; granulated yellow \$4.45; granulated white \$4.70; fine white and yellow in sacks \$1.13 to \$1.18; coarse do \$1.06 to \$1.10; Southern, in bags 98c to \$1.48 for the whole range; brewers' \$1.50 to \$1.60. Buckwheat flour was slow at \$2.25 for old and \$3 for new, with buyers and sellers apart generally.

Thursday was a day of firm and quiet markets generally. September wheat closed at \$1.00½, with small receipts, exports 16,000, spot sales 31,000, and options 3,752,000 bushels. September corn closed at 55c, with receipts 43,000, exports 16,000, spot sales 83,000 and options 1,376,000 bushels. September oats closed at 44½c., with receipts 76,000, spot sales 147,000, and options 245,000 bushels. Wheat flour was quiet and heavy. Receipts were 17,000, and sales 18,000 packages. Sales were made at the following quotations: Low extras \$3.35 to \$3.85; city mills \$4.90 to \$5.15; city mill patents \$5.25 to \$5.85; winter wheat low grades \$3.35 to \$3.85; fair to fancy \$3.90 to \$5.25; patents \$4.50 to \$5.65. Minnesota clear \$4.85 to \$5.15; straight \$4.65 to \$5.50; Minnesota straight patents \$5.15 to \$6.00; rye mixtures \$4.35 to \$4.90; superfine \$2.85 to \$3.85. The Minneapolis output last week was 164,540 barrels. The minor lines were unchanged and quiet.

BUFFALO MARKETS.

Buffalo, N. Y., September 28, 1890.

This market is quiet and quite firm. Following are the quotations: WHEAT—Sales were very light here to-day, the principal ones being 3,600 bu old No. 1 hard at \$1.14½; 2,500 bu do at \$1.14½; a car of new do \$1.06½, and another at \$1.07½; 3 cars new No. 1 Northern at \$1.01 to \$1.01½; a car of No. 2 red at \$1.03, and another at \$1.03½. New No. 1 hard closed at \$1.07; do No. 1 Northern at \$1.01; No. 2 red at \$1.02½ to \$1.03, and No. 1 white at \$1.02½. CORN—Prices went up ½c in the afternoon, closing at 53½ to 53¾c for No. 2 yellow, 52½ to 52¾c for No. 3 yellow, 52½ to 52¾c for No. 2 corn, and 51½ to 52c for No. 3 corn. OATS—The market was firm and steady, closing at 43½c on track and 44c in store for No. 2 white, 43c for No. 3 white, and 42½c on track for No. 2 mixed. BARLEY—There is some activity, and No. 1 Canada is quoted at 85¢ to 88c; No. 2 do at 80¢ to 85c; extra No. 3 do at 77¢ to 88c; No. 3 do at 72¢ to 77c; No. 2 Western at 73¢ to 76c; extra No. 3 at 68¢ to 70c. RYE—The market is entirely nominal at 66¢ to 68c for No. 2. OAT MEAL—Akron, \$6.45; Western, \$6.20 per bbl; rolled oats, in cases, 72 lbs, \$3.10. CORNMEAL—Coarse, \$1.00 to \$1.05; fine, \$1.05 to \$1.10; granulated \$1.60 per cwt. MILL-FEED—City-ground coarse winter, \$17.00 to \$17.50 per ton; fine do, \$17.50 to \$18.00; finished winter middlings, \$..... to \$20.00; coarse spring do, \$19.00.

FLOUR MARKET.

Spring Wheat.	Winter Wheat.
Patents..... \$6.25 to \$6.50	Patents..... \$6.25 to \$6.50
S't Bakers'... .. @5.75	S't roller... .. 5.25 to 5.50
Bakers' cl'r... .. @5.25	Amber... .. 5.00 to 5.25
B Rye mixt... .. @4.75	Crck'r flour... 5.00 to 5.25
Low Grades... .. @3.50	Low grades... .. 3.25 to 3.50
Rye flour... .. 3.50 to 3.75	Graham... .. 4.75 to 5.00

Retail prices 50c. above these quotations.

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A WONDERFUL LEATHER PRESERVATIVE, suitable for Leather, Rubber, Cotton or Rawhide Belting. Belts dressed with this dressing will last twice as long and transmit 100 per cent. more power. Save your Belting and prevent heating of journals by running them under a reduced tension. Sold on approval to responsible parties. SEND FOR CIRCULARS.

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000..... .91	3..... .1.20	8..... .1.50	13..... .2.16	Sprocket Wheels.
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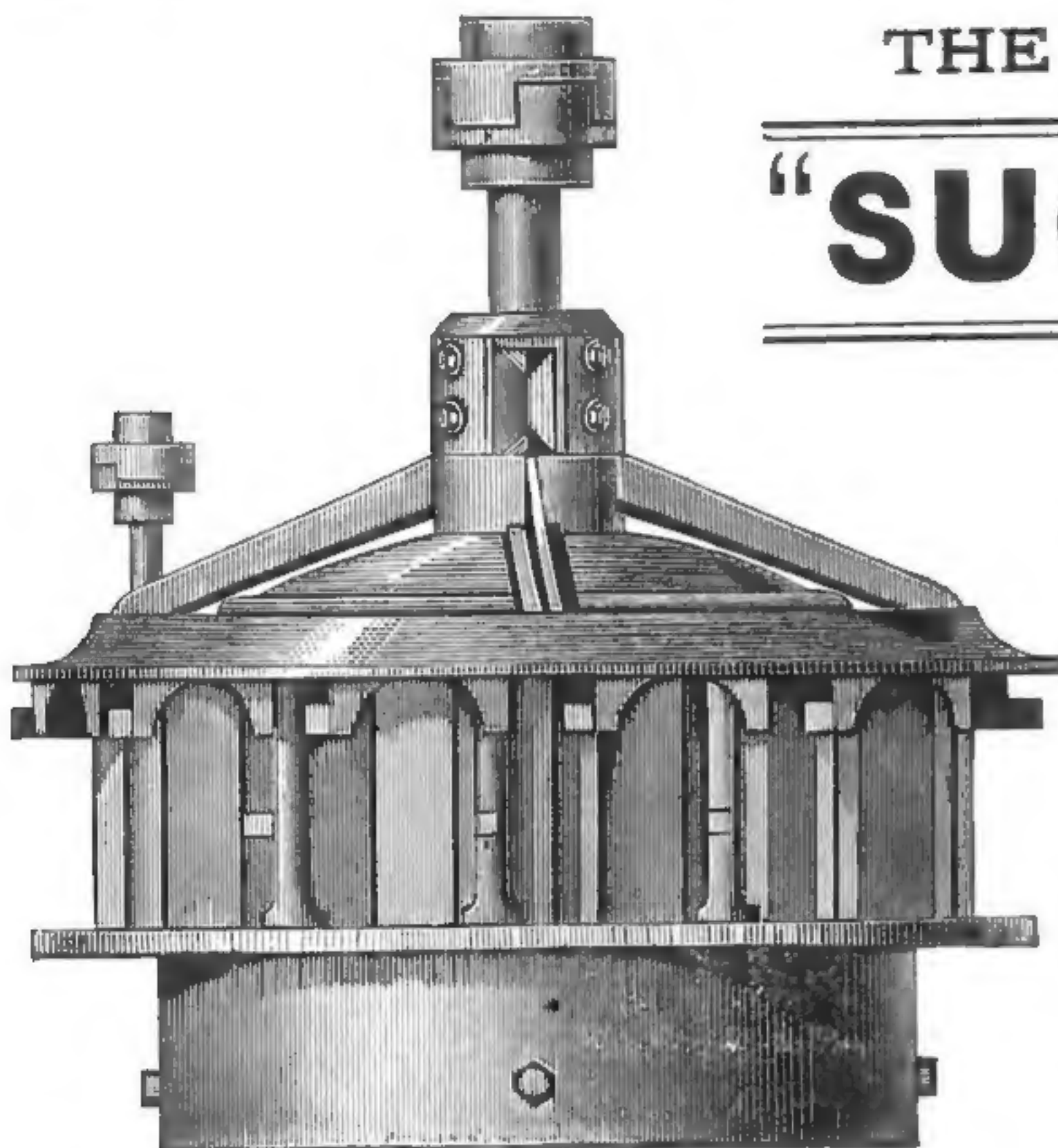
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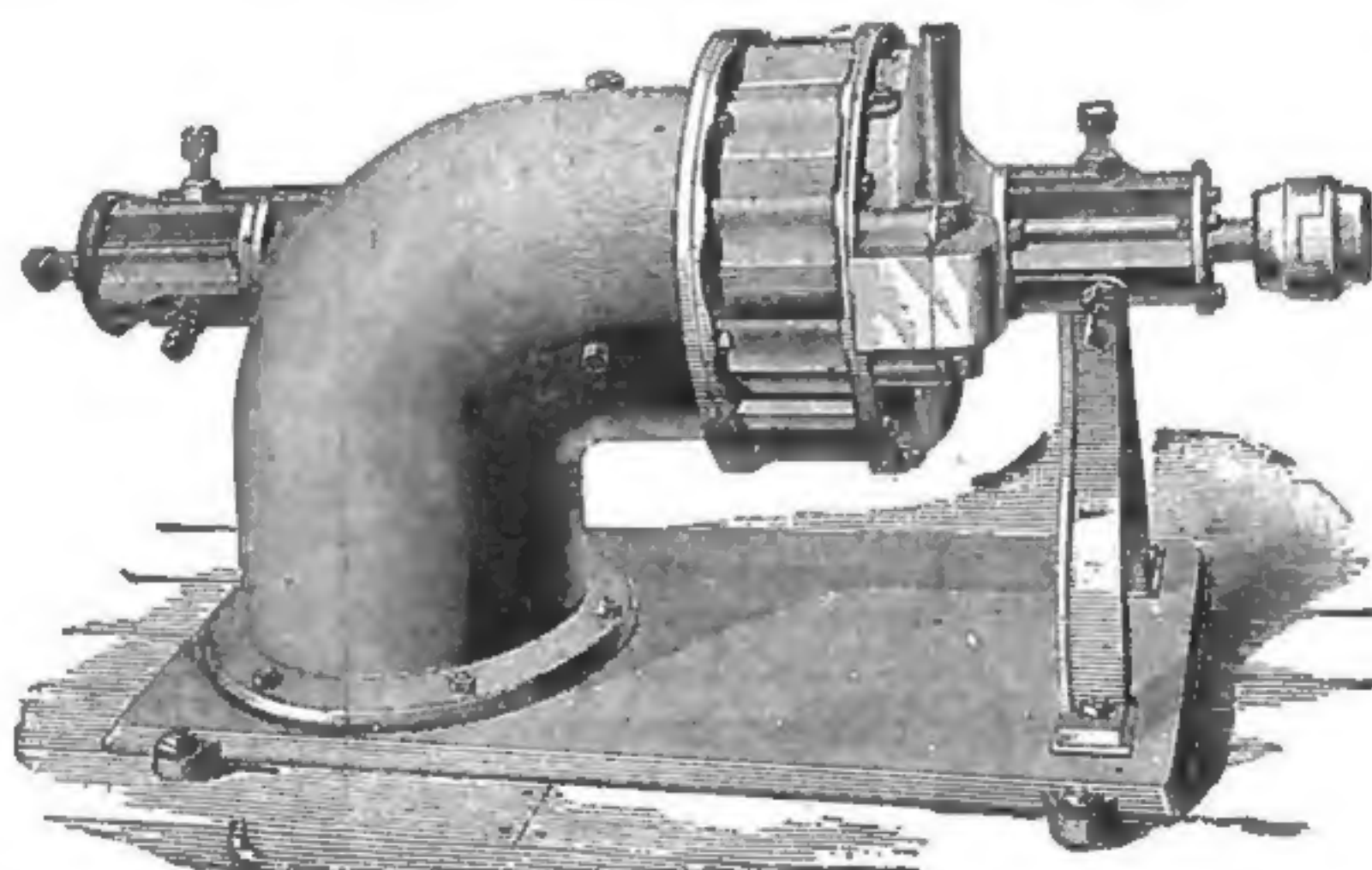
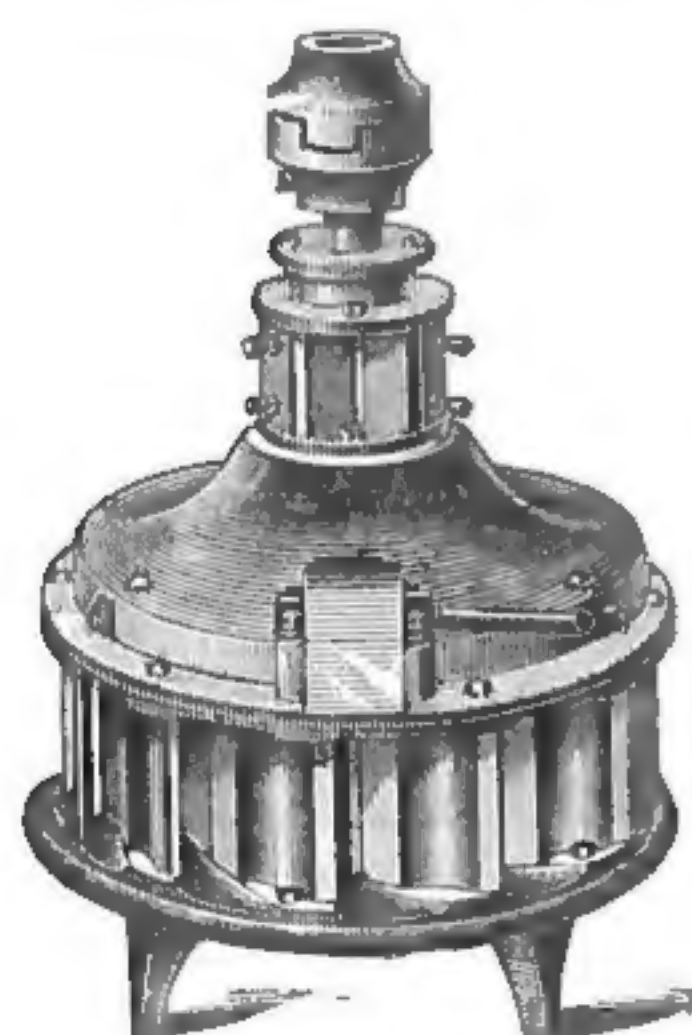


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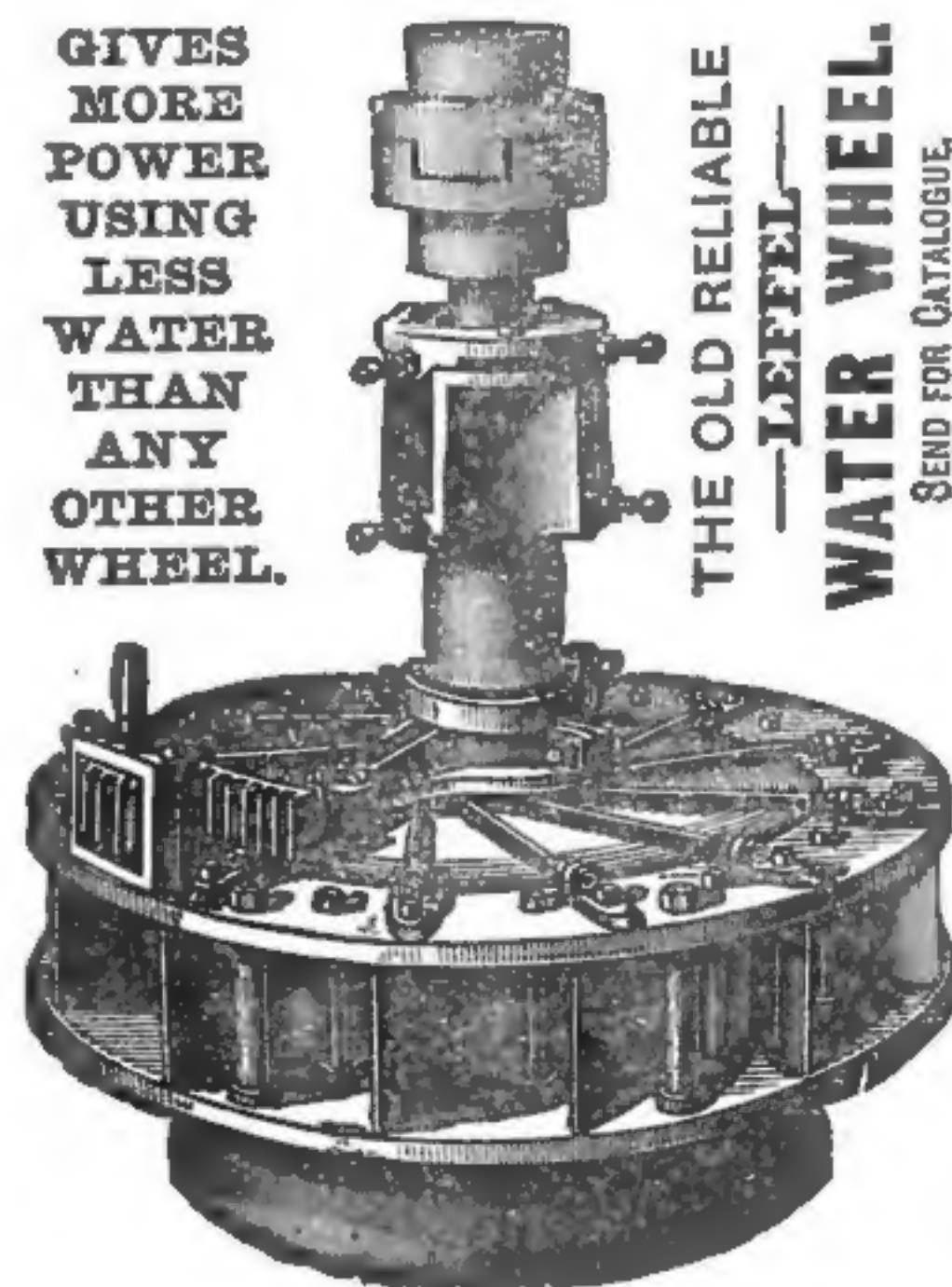


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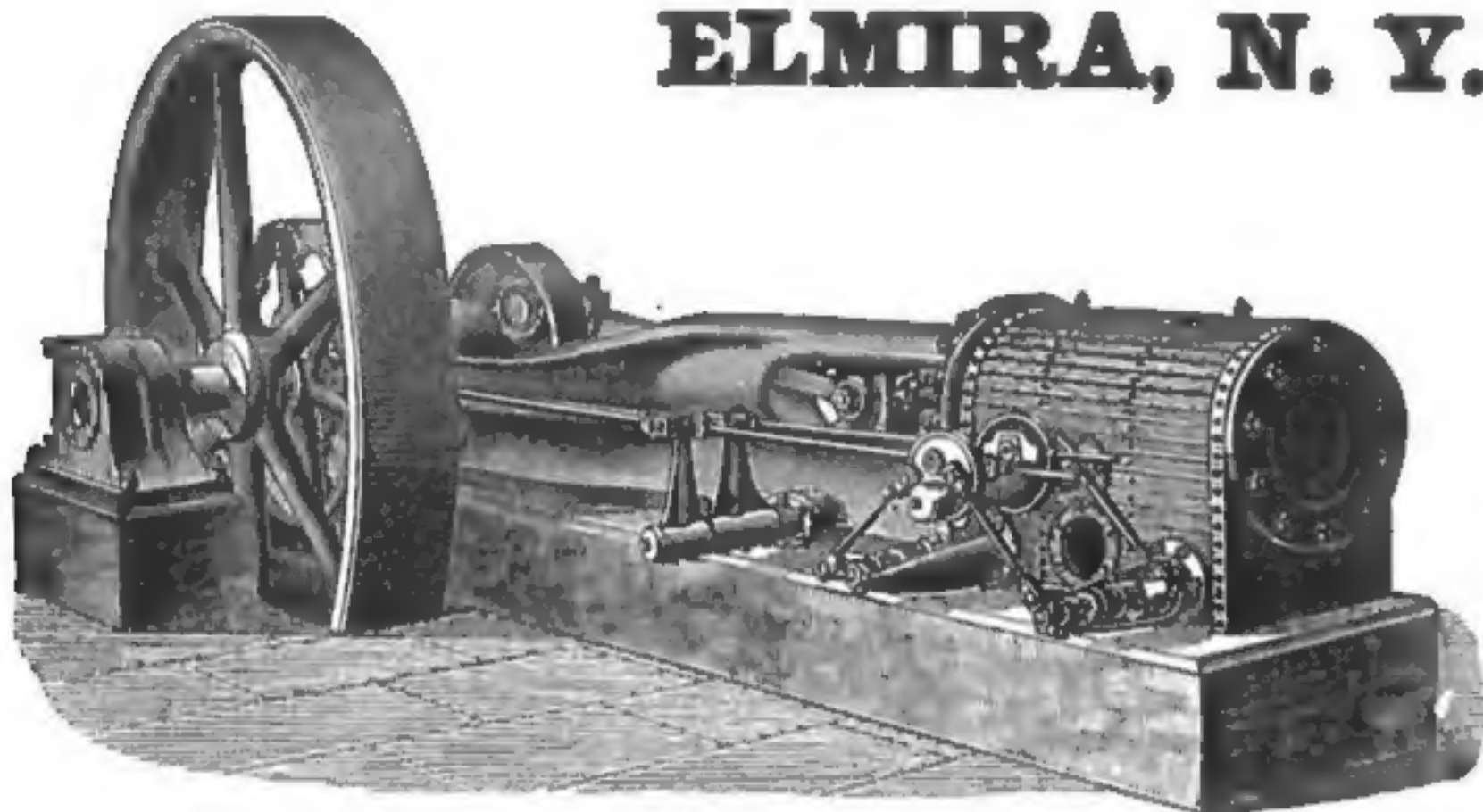


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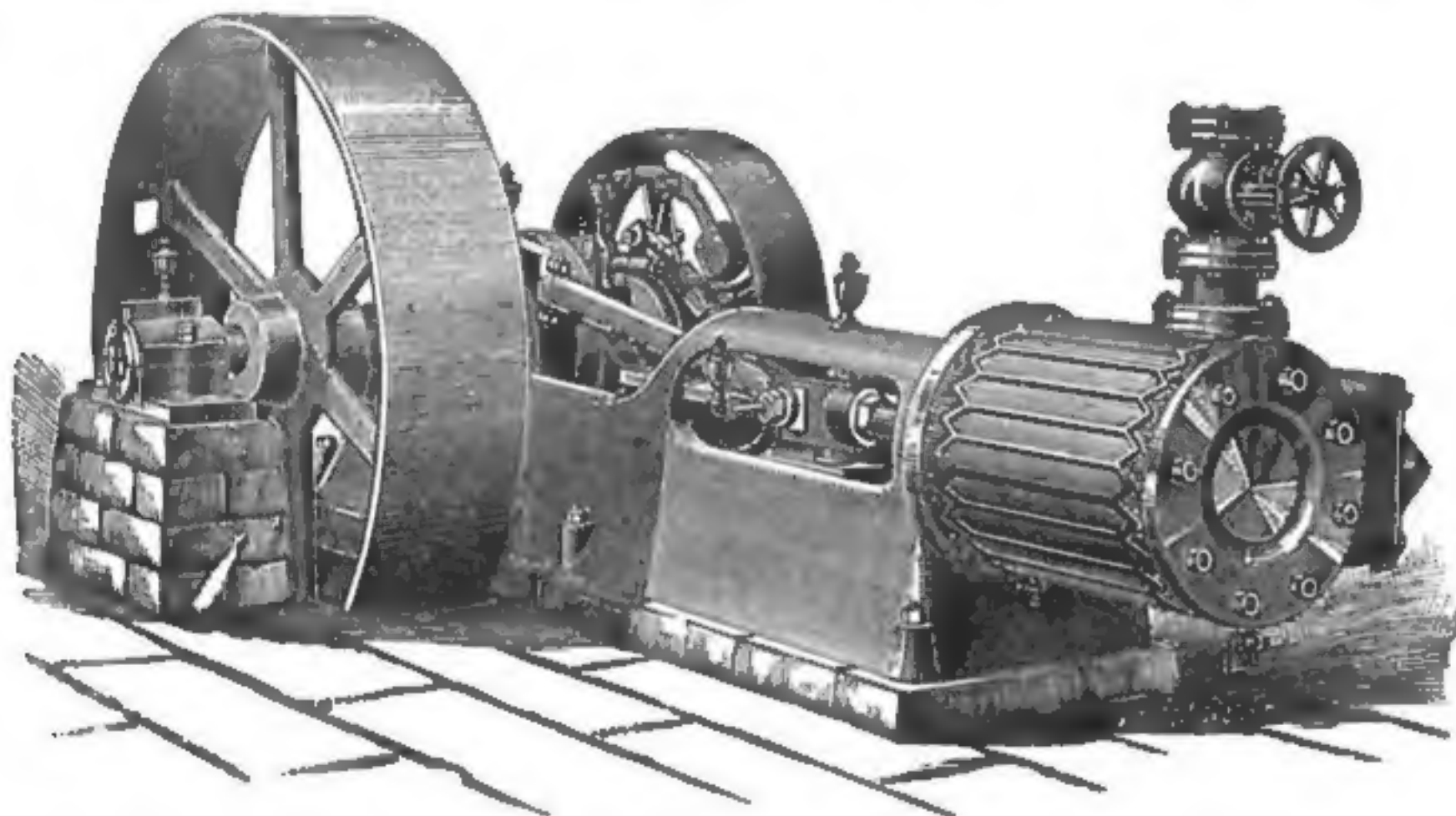
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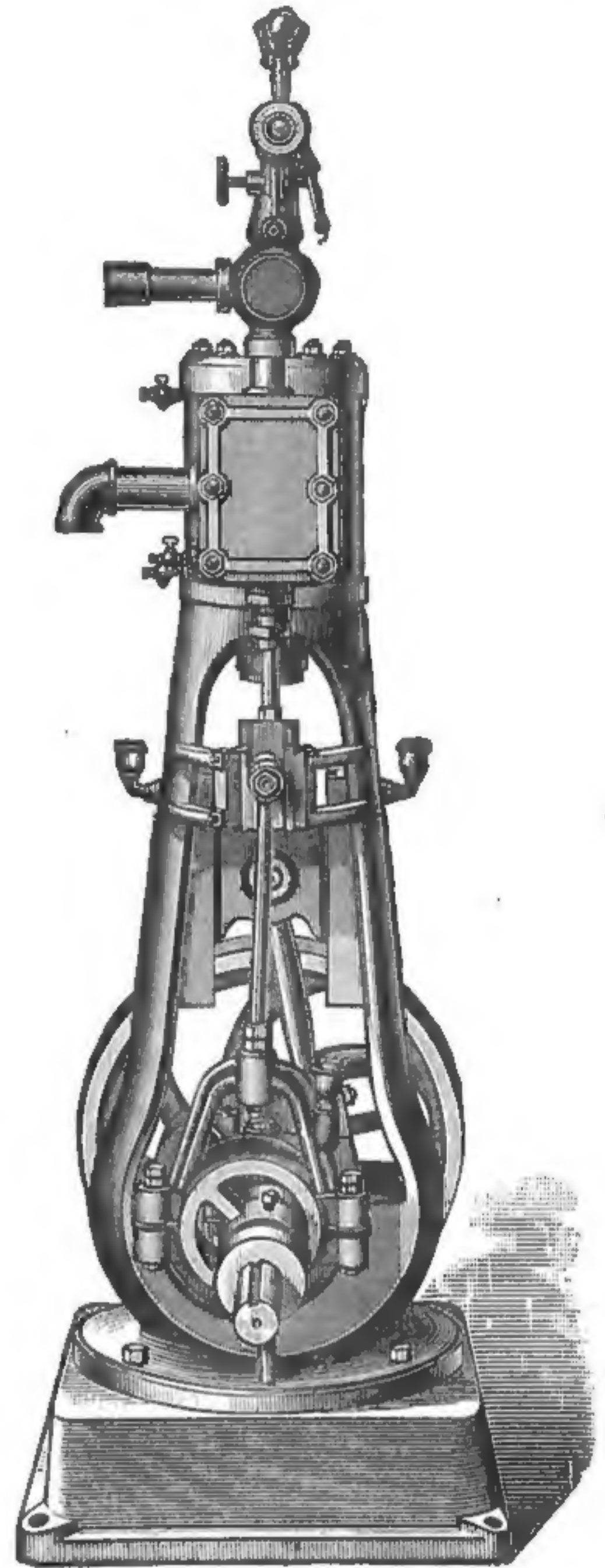
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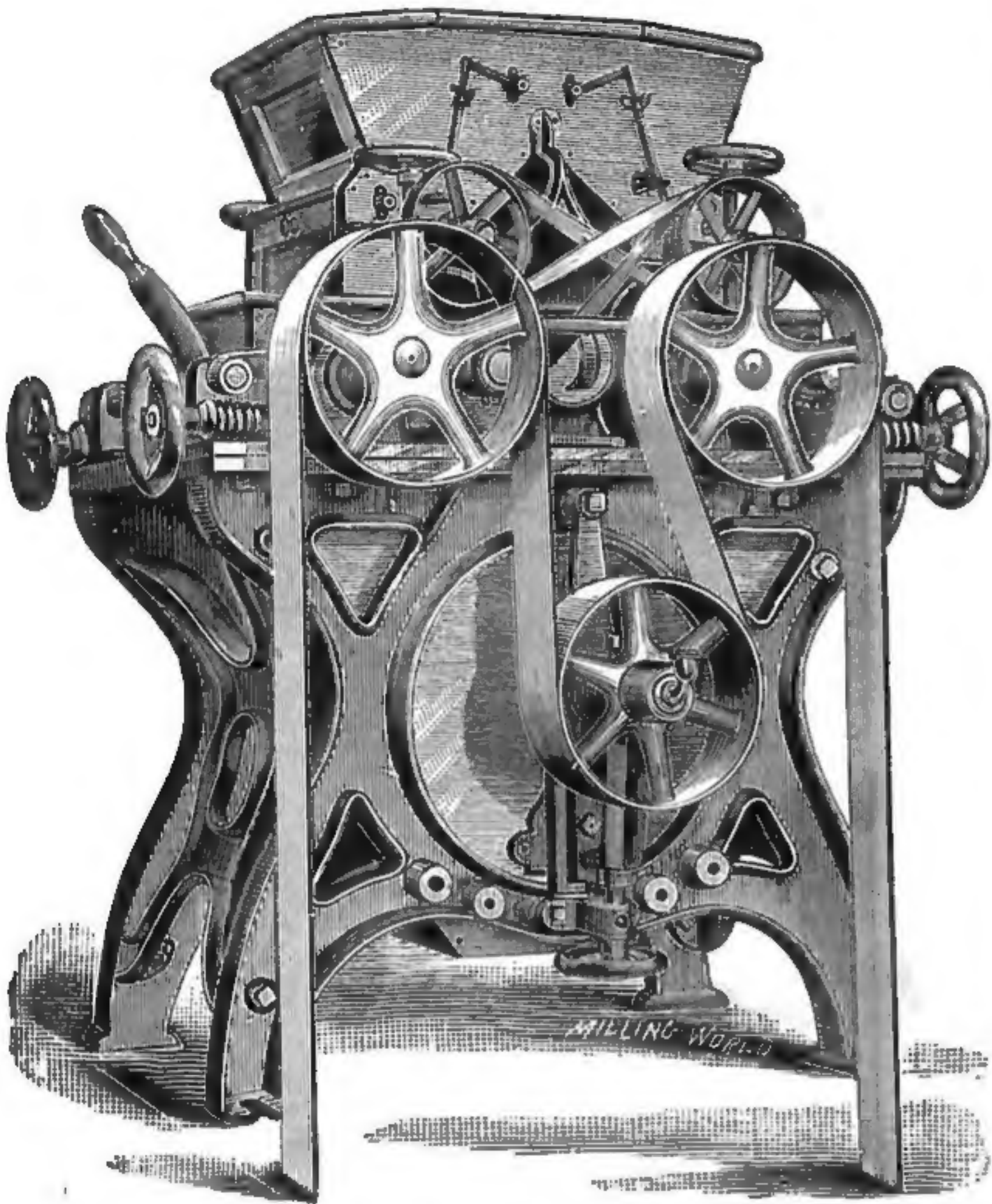
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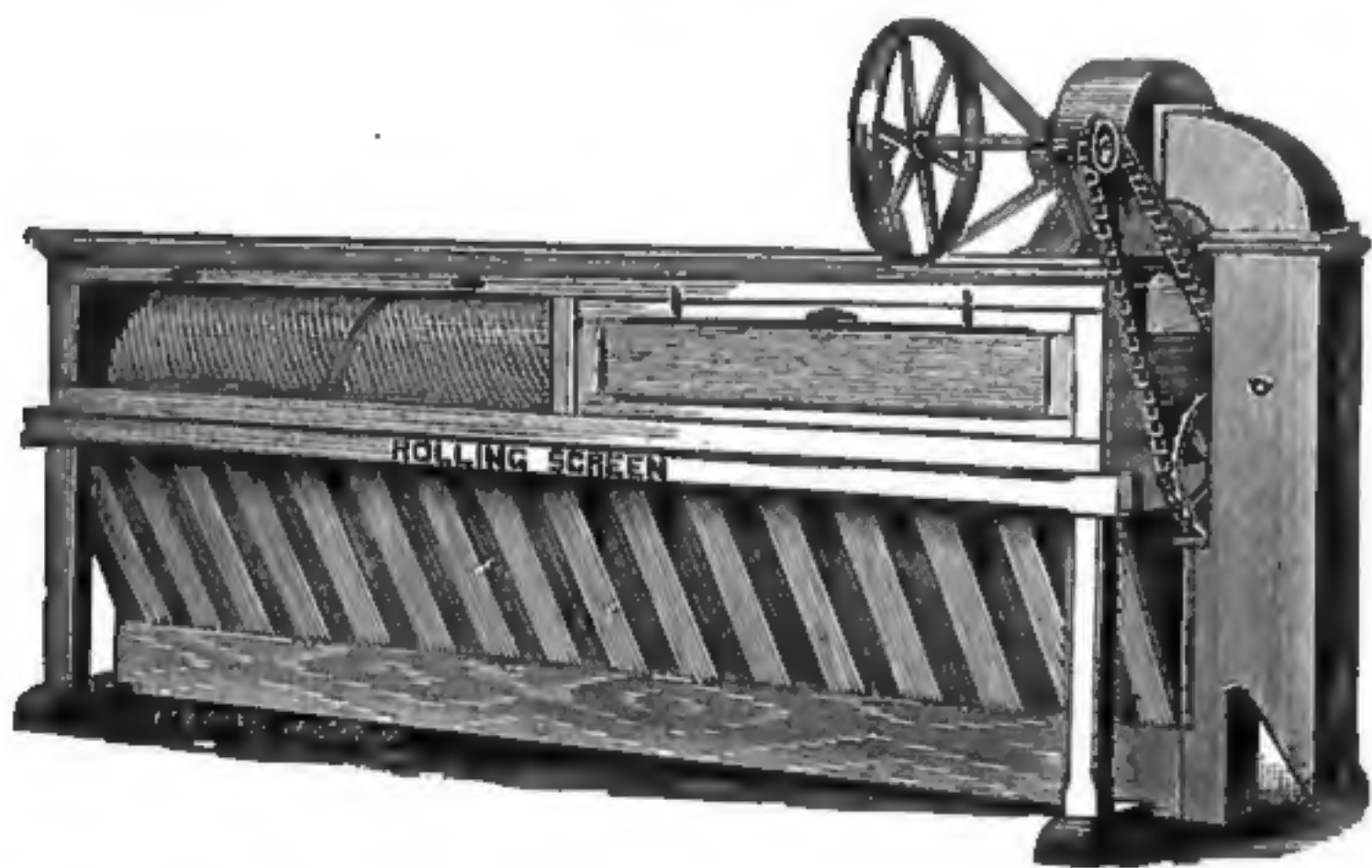
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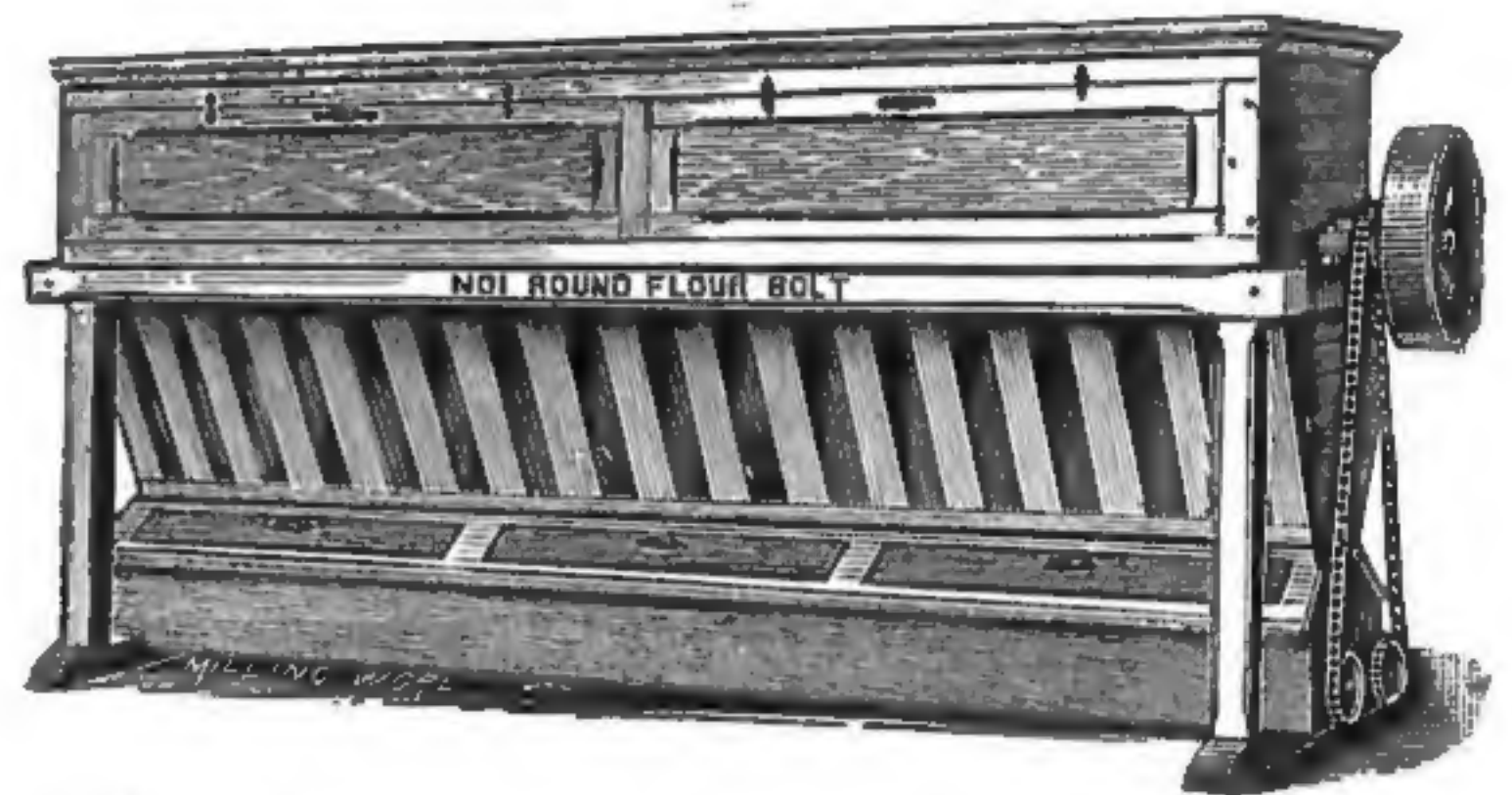
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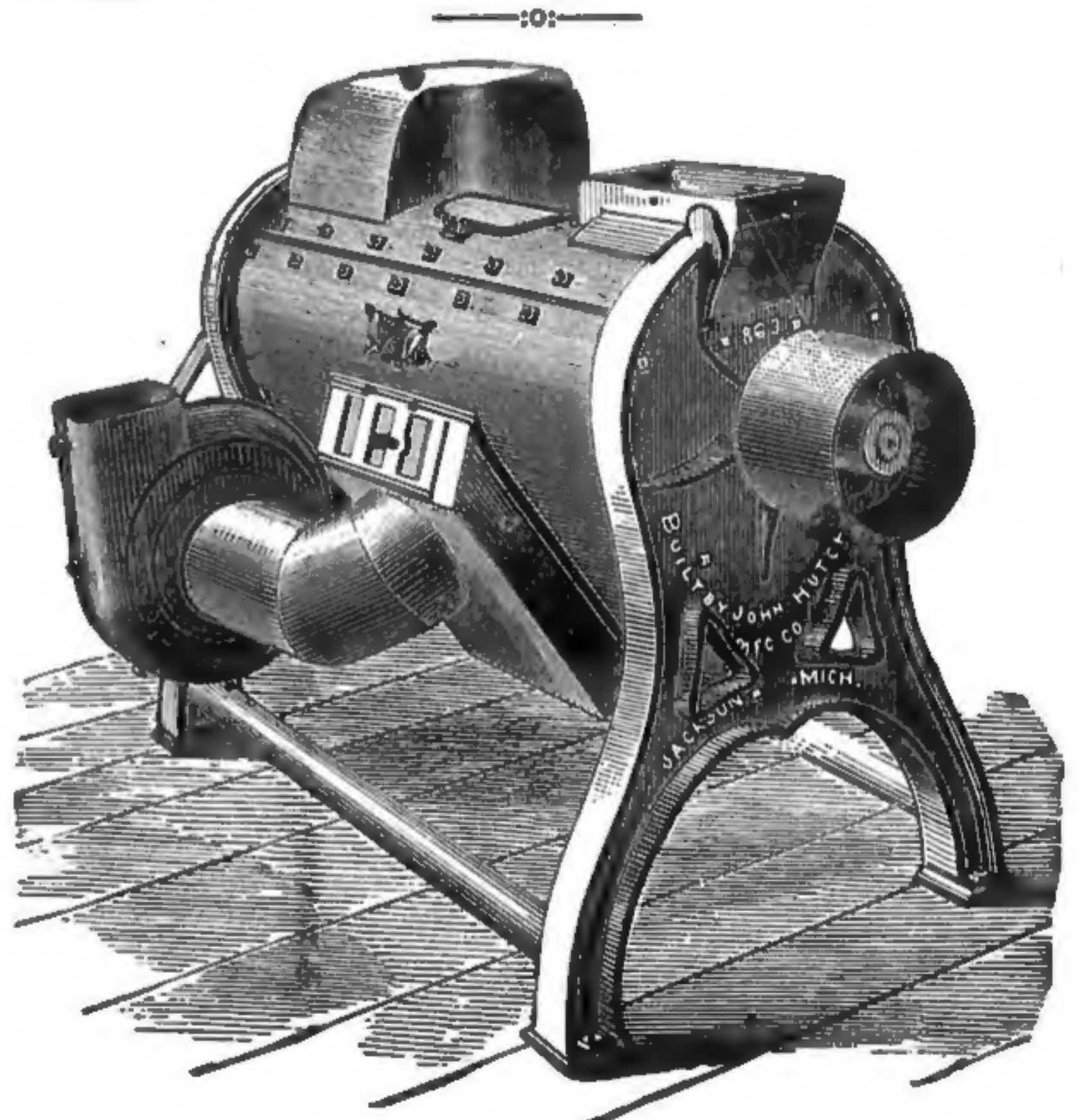


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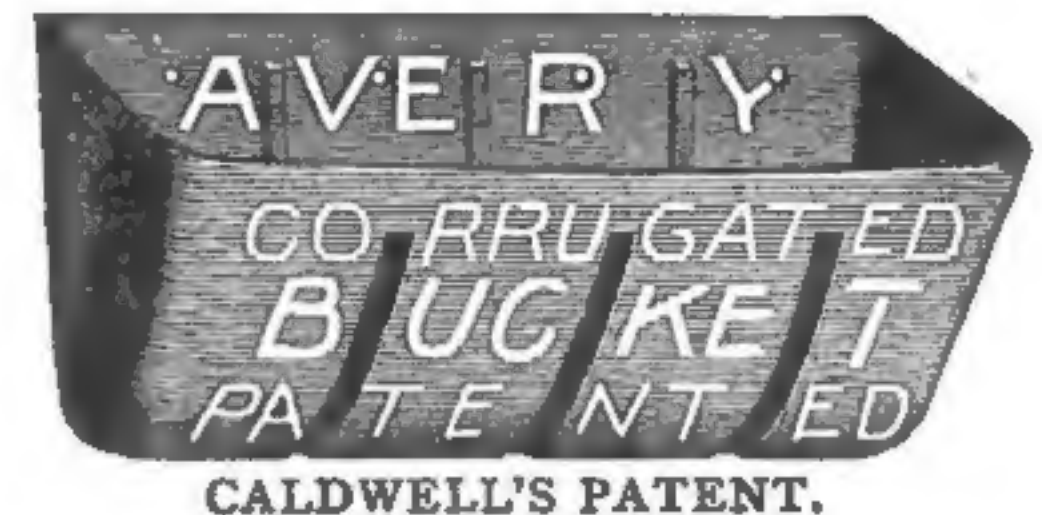
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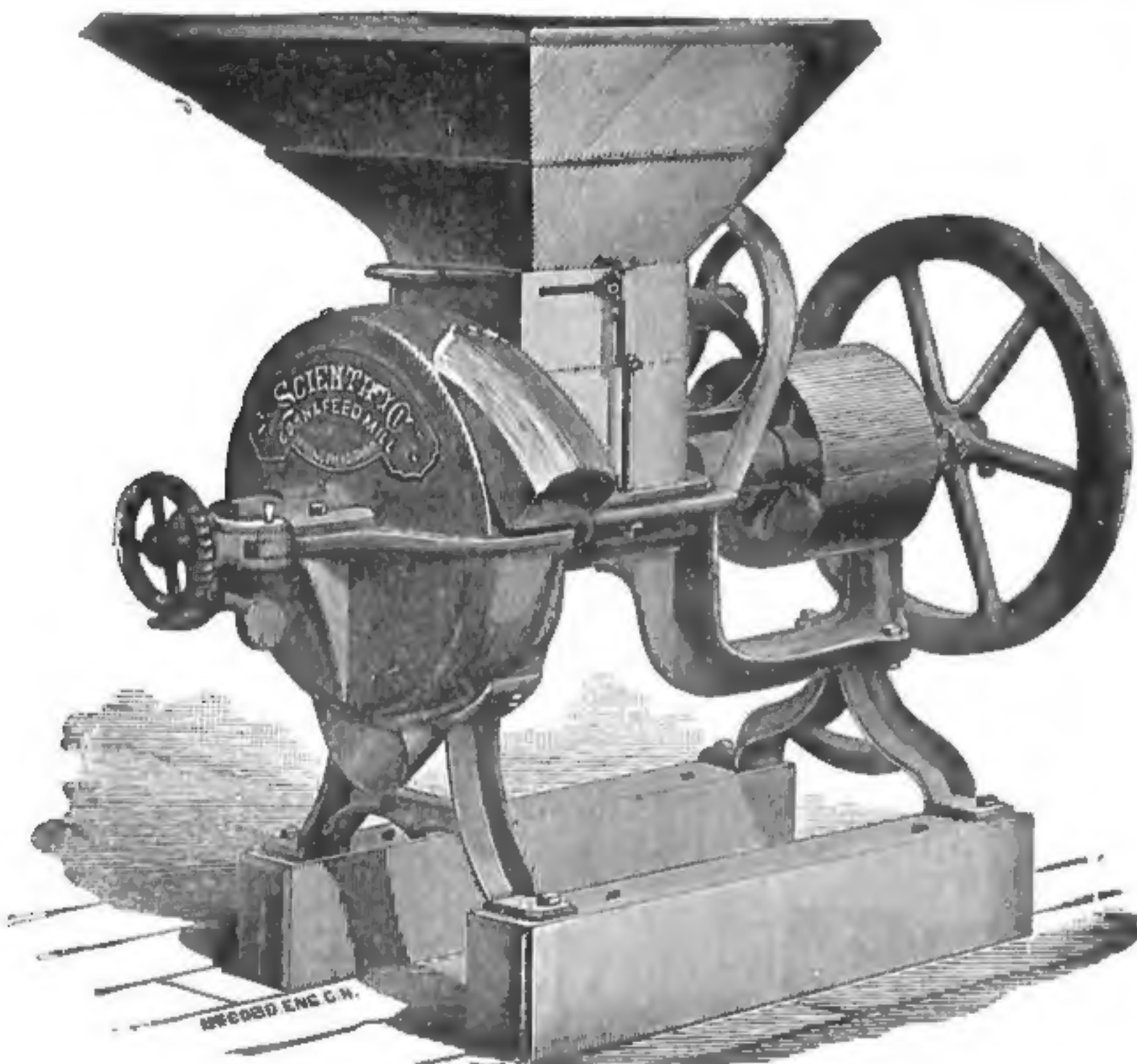
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